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[COMMITTEE PRINT]

A REVIEW OF MARITIME SUBSIDY POLICY IN THE LIGHT OF PRESENT NATIONAL REQUIREMENTS FOR A MERCHANT MARINE AND A SHIPBUILDING INDUSTRY

MERCHANT MARINE AND FISHERIES

HOUSE OF REPRESENTATIVES

EIGHTY-THIRD CONGRESS

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FOREWORD

There has been a critical need for a general reappraisal of the policies established by the Merchant Marine Act, 1936, as amended, for the purpose of determining their effectiveness in meeting present-day maritime problems. As the executive establishment responsible for the administration of the Government's maritime policies, it was appropriate that this evaluation be undertaken by the Department of Commerce and its Maritime Administration. This report presents a comprehensive review of maritime-subsidy policy in light of our national defense and economic needs for a merchant marine and shipbuilding industry—the first such comprehensive review by the executive branch of the Government since the 1936 enactment.

Requirements for an American merchant marine were projected on the basis of the best evidence now available. For the first time, definitive information outlining the national-defense needs both under mobilization and peacetime conditions were available through the cooperative efforts of the Departments of Commerce and Defense. An acceptance of planned national-defense requirements underlies the conclusions and recommendations of the report. The recommendations encompass proposals for legislative changes and administrative improvements.

Although the report reviews all major aspects of current maritime policies, it does not attempt to suggest solutions for all related problems. However, issues which require a more intensive and detailed examination than possible within the scope of this study are brought into focus.

The study was conducted under the general supervision of Charles L. Dearing, Deputy Under Secretary of Commerce for Transportation and reviewed by Louis B. Rothschild, Maritime Administrator. The report was prepared by a joint working committee representing the Office of the Under Secretary of Commerce for Transportation and the Maritime Administration under the direction of Donald C. Leavens of my immediate staff, who was directly responsible for its completion. Other members of the committee were Hobart S. Perry and James L. Pimper of the Maritime Administration and Robert G. Rhodes, Office of the Under Secretary for Transportation. Valuable assistance was provided throughout the course of the study by other staff members of the Maritime Administration.

ROBERT B. MURRAY, JR.,
Under Secretary of Commerce for Transportation.

LETTER OF TRANSMITTAL

THE UNDER SECRETARY OF COMMERCE
FOR TRANSPORTATION,
Washington, May 3, 1954.

Hon. THOR C. TOLLEFSON,
Acting Chairman, Committee on Merchant Marine and Fisheries,
House of Representatives, Washington, D. C.

DEAR MR. CHAIRMAN: I have the honor to transmit to the Committee on Merchant Marine and Fisheries, House of Representatives, a copy of a report entitled "Maritime Subsidy Policy" prepared by the Office of the Under Secretary of Commerce for Transportation and the Maritime Administration. A copy of the report has been transmitted to the President and copies are being made available to the Water Transportation Subcommittee, Committee on Interstate and Foreign Commerce, United States Senate, and to other interested Government agencies.

The report presents a comprehensive review of our maritime subsidy policy in light of national defense and economic needs for a merchant-marine and shipbuilding industry. Prior to this time, the executive branch had not undertaken a thorough examination of the maritime policies established by the Merchant Marine Act, 1936, as amended. In view of the Department's overall responsibility in the transportation field, we considered it essential that the Department and its Maritime Administration undertake this review of national maritime policy.

The report's conclusions and recommendations are based upon a careful consideration of our overall merchant-marine requirements. While they rest primarily on an acceptance of current national-defense planning, they recognize as well the fundamental importance of meeting these requirements through maximum utilization of private resources. The extent to which the Government should implement the programs suggested in the report will require, of course, careful consideration of their importance relative to other national-defense programs.

No attempt was made to suggest solutions for all problems relating to our merchant marine. Those, however, which require more intensive and detailed study than was possible within the scope of this report are brought into sharp focus.

You will understand, of course, that with the presentation to the Water Transportation Subcommittee, Interstate and Foreign Commerce Committee, United States Senate, being scheduled so soon after the completion of the final draft of the report, time would not allow for appropriate consultation on the report with other interested Government agencies.

We will be glad to provide any additional information regarding the report that the committee may desire.

Sincerely yours,

ROBERT B. MURRAY, Jr.

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MARITIME SUBSIDY POLICY

I. Ships and Ship Requirements

A. SHIPPING AVAILABLE TO THE UNITED STATES

1. Size and characteristics of the United States merchant fleet

The merchant fleet of the United States includes a wide variety of vessel types. It is owned in part by private operators and in part by the Government. It includes a large number of ships which are being operated and many ships which have been placed in a national defense reserve for emergency purposes. Many vessels of the active fleet are being operated on a commercial basis, a substantial number of which depend entirely upon Government cargo. The active fleet operates on all the major trade routes of the world and various types of vessels are employed according to the requirements of these routes.

Appendix tables 1 and 2 present a summary of the salient characteristics of the United States merchant fleet—ownership, major types, area of operations, activity status, private or governmental operation. Only the more important characteristics will be discussed.

Excluding vessels of special types and those under 1,000 tons gross, the United States merchant fleet on December 31, 1952, comprised 3,462 ships of 37,373,000 deadweight tons.[1] However, 1,264 ships or only about 37 percent were privately owned. The remainder, numbering 2,198 ships of 22,059,000 tons deadweight, was owned by the Government. Most of the Government-owned ships were inactive. Only 309 Government ships were in active operation, of which 33 ships (including 1 large passenger ship temporarily laid up for repair) were operated commercially by private operators while the remainder, constituting 277 vessels, was operated for Government account. Of these 169 were operated by the Department of Defense and 108 had been withdrawn temporarily from the reserve fleet for operation under general agency agreements.

The United States active fleet was not as large as the reserve fleet. Of the 3,462 ships in both fleets, only 1,521, or 44 percent, were in active operation. The remainder, which constituted 1,941 ships, or 56 percent of the total, were inactive and all but 64 of these vessels were laid up on a permanent basis in the Maritime Administration reserve fleet. The other 64 ships, classed as temporarily inactive, had remained in port for at least 2 weeks undergoing repairs or waiting for cargo, or were ships which belonged to the Maritime Administration and were being prepared for lay-up.

[1] The text analysis of the employment of the United States-flag merchant fleet is based principally upon numbers of ships in order to simplify the presentation of the subject. Deadweight tonnage will be given occasionally but the reader is advised to consult appendix table 2 for complete information on the carrying capacity of the fleet in terms of such data. All ship and cargo data are presented as of December 31, 1952, in order to correspond with the most recent mobilization data prepared by the Department of Defense, to make use of readily available Maritime Administration statistics, and to minimize differences in ship and cargo data due to seasonal influences.

A very substantial portion of the active fleet was being operated on a commercial basis. Of the 1,521 active ships, 75 percent, or 1,144, were being operated commercially while the remaining 377 ships were performing transportation services for the United States Government. Of these operating for the Government, 100 ships were privately owned, operating under time charter to the Military Sea Transportation Service, and 108 were Government-owned ships operating under general agency agreements by private shipping companies.

Most of the active fleet was engaged in foreign trade services. All of the 377 ships engaged in United States Government transportation services were so employed, as were 666 ships which were operated commercially. Altogether, 1,043 vessels or about 68 percent of the active fleet were engaged in the foreign trade. The remainder, comprising 478 ships, was engaged in the 3 major domestic oceangoing trades, of which 356 ships (mostly tankers), or 75 percent of the total, were employed in the continental coastwise trade.

As for composition, the active merchant fleet consists principally of freight-carrying vessels. In this category were 927 dry-cargo freighters and 489 tank ships, mostly oil-carrying tankers, making up about 93 percent of the fleet. The passenger-carrying vessels numbered only 105 ships, or about 7 percent of the total. Excluding vessels engaged in United States Government operations, there were 1,144 vessels in active operation with the following breakdown: 676 dry-cargo freighters, 424 tankers, and only 44 passenger-carrying vessels.

Most of the dry-cargo freighters were engaged in foreign trade. Five hundred and six dry-cargo ships out of a total of 676 were operated in those trades. On the other hand, tankers predominated in the United States continental coastwise trade as 308 of these ships out of a total of 424 were operated in that trade. With the exception of 3 vessels, the 44 actively operated passenger vessels were operated in the foreign trade.

2. United States merchant ship employment

On December 31, 1952, 492 privately owned and operated United States-flag dry-cargo vessels were engaged in foreign trade. These were divided almost equally between the subsidized and nonsubsidized operators. The subsidized operators employed 246 [2] dry-cargo vessels of about 2.6 million deadweight tons, and an equal number of about the same tonnage by the nonsubsidized carriers. In addition there were 100 privately owned vessels operated by the Military Sea Transportation Service of which 11 were owned by subsidized companies and 89 by nonsubsidized companies. However, the difference in quality of these vessels is noteworthy. Of the 11 vessels owned by subsidized lines (all of which were off subsidy upon their charter to MSTS), 9 were of the desirable C–3 and C–2 types and the remaining 2 were Victorys. In contrast, about four-fifths, or 74, of 89 vessels owned by the nonsubsidized lines were slow-speed Libertys; only 8 vessels were C types and an additional 3 were Victorys.

Appendix table 3 shows a breakdown of the employment in the foreign trade by areas of United States-flag dry-cargo ships owned

[2] In this discussion and the accompanying tabulations, the fleets of Pacific Far East Line, Inc., and Pacific Transport Lines, Inc., which began subsidized operations on January 1, 1953, are included with the subsidized carriers as of December 31, 1952. These fleets comprise 12 vessels of 135,000 deadweight tons in trade with the Orient and Far East and 1 vessel of 11,000 deadweight tons in trade between the United States Pacific coast and the Mediterranean. Included are 17 vessels owned by subsidized carriers operating in the foreign trade which were not subsidized.

by the subsidized and nonsubsidized carriers. Not only do most of the subsidized vessels operate in the overseas foreign trade, but the majority of vessels owned by nonsubsidized operators are employed in these trades as well. However, the subsidized vessels are employed more evenly among the several trade areas than are the nonsubsidized ships. The subsidized operators employed vessels in every major area, while nonsubsidized vessels did not serve such important areas as the Baltic, East and South Africa, Australia, and the east coast of South America.

The largest concentration of vessels in any single area was in the Orient and Far East where nonsubsidized carriers had 81 freighters of 896,000 deadweight tons as compared with 52 freighters of 584,000 deadweight tons for the subsidized carriers. Both groups of operators had about the same number of vessels employed in trade between the United Kingdom and Atlantic Europe and the United States. In the South American trade subsidized operators predominated with 40 freighters of 426,000 deadweight tons contrasted with 14 vessels of 282,000 deadweight tons for the nonsubsidized carriers.

Most of the United States-flag passenger-carrying vessels engaged in foreign trade are owned by subsidized operators. Included are such large passenger vessels as the *United States*, *America*, *Constitution*, and *Independence*. Of the 34 United States-flag privately owned passenger-carrying vessels engaged in foreign trade, the nonsubsidized carriers owned only 8, all of which were employed in the nearby Caribbean trades. The subsidized operators owned 26 such vessels. Of these, 21 were employed in overseas foreign trades: 10 in the transatlantic trade, 9 in trade with South America, and 2 in the round-the-world service. In addition, 4 Government-owned passenger-carrying vessels were operated in the foreign trades by subsidized lines, 3 in the east coast of South America trade, and 1 in the transpacific trade. One other vessel ordinarily in this latter trade was under repair. (See appendix table 4.)

All of the 272 dry-cargo and passenger-carrying vessels owned by the subsidized carriers and employed by them in the foreign trade of the United States were in liner service as of December 31, 1952. (See appendix tables 3 and 4.) About two-thirds, or 165 of the 254 dry-cargo and passenger-carrying vessels owned by the nonsubsidized carriers and employed in foreign trade, were in liner service as of the same date. (See appendix table 5.) The remaining vessels engaged in foreign trade were divided almost equally between industrial and irregular services.

Almost all nonsubsidized vessels in liner service were employed in overseas foreign trade. The majority of these vessels in turn were divided almost equally between the transatlantic and transpacific services with 66 vessels of 716,000 dead-weight tons in the transatlantic service and 67 vessels of 747,000 dead-weight tons in the transpacific service. All eight of the nonsubsidized passenger-carrying vessels were employed in liner service in the nearby Caribbean trades.

Of the 89 vessels not in liner service, 47 were in irregular and 42 in industrial service. In the irregular service 45 of the 47 vessels were in the overseas foreign trade. The majority of these were in the transatlantic service mainly with Atlantic Europe, the United Kingdom, and the Mediterranean.

In contrast to the liner and irregular services, industrial carriers were concentrated more heavily in the nearby foreign trades. Of the 42 vessels in industrial service, 29 were employed in the nearby foreign trade.

3. Availability of foreign-flag ships

Foreign-flag water transport capacity as of December 31, 1952, comprised 10,662 ships of 78,770,000 tons dead weight.[3] Only a small percentage of this vessel tonnage can be depended upon to be available to the United States in the event of a national emergency. These vessels are registered under the laws of sovereign powers which may wish to control their respective merchant fleets during any major international emergency situation. Furthermore, about 600 ships of about 3,285,000 dead-weight tons are under the control of Iron Curtain countries. (Includes 83 ships of 785,000 dead-weight tons transferred to U. S. S. R. under United States lend-lease agreement.) Therefore, sound logic dictates that any estimate of the number of foreign-flag merchant ships which will be available to the United States in the event of a serious international emergency must be a conservative one. Only the foreign-flag vessels owned by United States citizens and their affiliates and registered under the laws of Panama, Honduras, Venezuela, and Liberia are considered as available to the United States Government in case of national emergency. As a consequence, United States shipping resources may be augmented by 137 tankers of 2,728,000 tons dead weight and 45 dry-cargo ships of 321,800 tons dead weight. The availability of other United States-citizen-controlled foreign-flag vessels is extremely doubtful.

Until North Atlantic Treaty Organization (NATO) planning progresses further, it is not possible to determine the extent to which Allied shipping will be available to meet United States requirements. Therefore, it is not possible at this time to conclude that any such tonnage is available to meet United States requirements.

4. Total shipping available

The problem of determining the quantity of available water transportation capacity in time of serious national emergency should be approached on a conservative basis. The element of chance should never be permitted to enter into any calculations regarding requirements and availabilities. It is true that during World War II the United Kingdom obtained substantial quantities of ship tonnage from continental European sources, but much of it was obtained after those continental countries had been invaded. Nevertheless, the United Kingdom needed most of the tonnage which it controlled for its own uses. The small number of foreign-flag ships which the United States obtained in World War II was more than offset by the ships which we were required to lend-lease or charter to our allies.

It appears, therefore, that during a major international military conflict the United States must depend primarily upon its merchant flag fleet and ships controlled by citizens of the United States and registered under the laws of Panama, Liberia, Venezuela, and Honduras.

[3] These figures exclude merchant ships owned by any military force and include 83 ships of 785,000 deadr weight tons owned by the United States under the control of the U. S. S. R., having been transferred unde-lend-lease but not returned.

In summary, vessels considered available to the United States as of December 31, 1952, are as follows:

Flag	Total		Freighter		Tanker		Passenger-carrying	
	Number	Dead-weight tons	Number	Dead-weight tons	Number	Dead-weight tons	Number	Dead-weight tons
Total	3,644	40,423,000	2,677	27,519,000	657	10,479,000	310	2,407,000
United States	3,462	37,373,000	2,632	27,197,000	520	7,769,000	310	2,407,000
Foreign	182	3,050,000	45	322,000	137	2,728,000		

For the purposes of this report, the 1,264 merchant ships owned by private operators and the 33 Government-owned vessels chartered by private operators—a total of 1,297—were considered as the active United States-flag commercial fleet.

B. COMMERCIAL SHIPPING REQUIREMENTS

1. Volume of foreign trade

In order to visualize the overall volume of United States foreign trade, data have been developed for the prewar years 1937–38, and for the postwar years 1948–52. These data, presented in appendix tables 6 and 7, emphasize the impracticability of selecting any single year or other period as a norm upon which to predicate commercial fleet requirements. For example, exports during the postwar years have been increased by the large quantities of cargo generated by United States loan and aid funds, and by the abnormally large foreign demand for certain bulk cargoes such as coal and grain, which attained peak shipments in 1948 and 1951. Imports of raw materials essential to increased production necessitated by the war in Korea and the defense production and defense stockpiling programs have materially increased inbound tonnage in some of the postwar years. More detailed discussion of these fluctuations in United States foreign trade is included in another section of this report.

Overall United States foreign trade, dry-cargo and tanker, increased very substantially postwar over prewar (162 million tons in 1952 as compared with 83 million tons in 1937). Dry-cargo tonnage increased by nearly 46 million tons, or about 85 percent, and tanker traffic increased by over 33 million tons, or about 115 percent. But these overall data do not adequately reflect the trend in foreign trade as it affects United States-flag shipping. For example, whereas tanker imports have increased about 400 percent, tanker exports have declined slightly more than 40 percent. With respect to dry-cargo trade, which increased by 45.8 million tons between 1937 and 1952, most of that increase was in nonliner traffic—38 million tons compared with 7.8 million tons for liner traffic.

(*a*) *Dry cargo.*—Exports and imports of dry-cargo overall were virtually in balance in 1937, but in the postwar years export tonnage has generally exceeded import tonnage by considerable margins, largely because of extraordinary shipments of certain bulk commodities. The year 1950 was an exception when coal exports were at their lowest postwar level.

As might be expected, the large postwar shipments of bulk cargoes have been accompanied by a corresponding increase in the proportion of nonliner carryings to total traffic. In 1937–38 tramp cargoes comprised only one-third of the total United States oceanborne dry-cargo trade, while in the postwar period such cargoes have ranged from one-third of the traffic in 1949–50 to more than one-half in 1951–52.

Postwar, United States-flag ships have participated to a much greater extent in nonliner traffic than they did before World War II. United States tramp shipping before the war was of minor importance as attested by the fact that our tramp ships carried only 1 percent of total dry-cargo exports and 3 percent of the total dry-cargo imports, or 2 percent of the total dry-cargo foreign trade in 1938. While this percentage participation improved considerably postwar, it also varied quite widely from year to year. Thus, in 1950, when dry-cargo traffic totaled 66.3 million tons, United States-flag nonliner carryings amounted to only 4 percent of such traffic, but in the next year, when the volume of dry cargo jumped to 110.4 million tons these carryings amounted to 19 percent of the total.

United States-flag vessels likewise fared somewhat better in liner traffic postwar than they did in 1937 and 1938. In the past 3 years United States-flag vessels carried nearly 50 percent of the liner traffic in contrast with 43 and 37 percent in 1937 and 1938, respectively.

(*b*) *Tanker cargo.*—During 1937–38 only one-fourth of the 60 million tons of tanker export and import traffic was carried in United States-flag vessels. This is in contrast with United States-flag carryings of two-thirds during 1948–49. However, the effect of increasing foreign-flag competition is evidenced by the fact that although United States-flag tankers carried approximately the same tonnage in 1952 as they did in 1948 (23.5 million tons), their proportion of the total declined from 65 percent in 1948 to only 38 percent in 1952.

Recent studies estimate a continued increase in the United States consumption of petroleum products. The 1951 report of the Petroleum Administration for Defense estimated petroleum and petroleum products requirements for United States consumption in 1955 to be 23 percent greater than in 1950 when such imports by tankers totaled nearly 45 million tons. For the long-range future, the President's Materials Policy Committee, in June 1952, projecting petroleum requirements to 1975, estimated that the level of United States consumption will be 110 percent above 1950. It can be assumed that the postwar growth in tanker imports will continue, and a substantial portion of this movement should be carried on United States-flag tankers to assure the availability of such imports during periods of emergency.

(*c*) *Foreign-aid cargo.*—As has been mentioned, export traffic in the postwar period has been influenced to a marked degree by Government-financed shipments through the several foreign-assistance programs. Under these programs, from April 3, 1948, through December 31, 1952, the overseas dry-cargo and tanker-cargo movement totaled more than 74.2 million tons, of which 41.3 million tons were carried in United States-flag ships.

Appendix table 8 shows a breakdown of ECA/MSA-financed shipments to Europe and the Far East by years, by flag of vessel, and type of service. From the beginning of the program in 1948 through 1952 about 98 percent of the total shipments were made to the European

area. The volume of aid shipments varied greatly from year to year; peak shipments totaling 25.6 million tons were made during the period April 1948 to April 1949. Shipments fell off to 10 million tons by 1950, but in 1951 they were increased to 13.9 million tons. In 1952 they reached a low of 8.5 million tons.

On a tonnage basis, shipments carried by dry-cargo vessels were much greater than shipments transported by tanker vessels. Of the 74.2 million tons of aid cargo, 68.6 million tons, or 92 percent, were carried by dry-cargo ships while the remainder, totaling 5.6 million tons, was moved by tanker vessel. Since the aid legislation required not less than 50 percent of the cargo to be shipped in United States-flag vessels, it is of interest to note that those ships carried 41.4 million tons, or about 56 percent of the total aid cargo. United States-flag ships carried more than 50 percent of these shipments in all except 1948 when they moved 46 percent of the total. Two-thirds of the total for all years, or 46 million tons, was carried by tramp ships. Ships in berth service and tankers carried the remainder representing a substantial amount of the aid cargo.

An indication of the relative importance to United States foreign trade of shipments under the Government assistance programs may be obtained by comparing the data in appendix table 8 with total exports shown in appendix table 6. For the first year and three quarters of the foreign-aid program, Government-financed shipments approximated 40 percent of total exports.[4] The relative importance of these shipments has declined in more recent years, representing only 12 percent of total exports in 1952.

(*d*) *Passenger traffic.*—Appendix table 9 shows the number of passengers arriving and departing by sea at ports of the United States for fiscal years 1937 and 1938 and 1946 through 1952. Total inbound and outbound passenger travel by sea has increased since the end of the World War II to a point where it is approaching the 1.1 million passengers carried during each of the years 1937–38. The table also shows that a considerable higher percentage of the passengers was carried on United States-flag vessels during the postwar period than during the years 1937–38, this proportion ranging from 61 percent in 1946 to 41 percent in 1951 and increasing again in 1952 to 44 percent.

A breakdown of waterborne and airborne passenger arrivals (which are greater than departures) in the United States by overseas foreign areas of origin is presented in appendix table 10. Europe has been the principal origin area of passengers arriving in the United States in the postwar period. Approximately two-thirds of the passengers arriving from Europe traveled by sea and the remainder by air. Of those arriving by sea from Europe, more than 60 percent traveled on foreign-flag vessels, reflecting the sharp foreign-flag competition for passenger travel in this important trade. United States-flag ships carried most of the passenger arrivals from other major overseas areas. In every area with the exception of Europe the trend in air travel has been upward. From Asia for example, the percentage passenger arrivals by air has climbed from 16 percent in 1949 to 43 percent in 1952; other areas have similar increases in air traffic. From Europe, where the total passenger traffic is far heavier than from any other area, the percentage of departures by air has remained at about 30 percent

[4] Not strictly comparable on a calendar year basis.

during the postwar period. Overall, these trends in passenger arrivals lead to the conclusion that vessel travel is slowly losing ground to air travel.

2. Domestic oceanborne traffic

In any serious attempt to evaluate the trend of deep-sea traffic, consideration must be given to the volume and character of the commerce moving in the domestic trade. Unfortunately, historical statistical data for most of the traffic moved in the United States domestic oceangoing trades are unsatisfactory. With the exception of the intercoastal trade which constitutes only a minor portion of the total domestic deep sea waterborne traffic (about 6 percent 1952), recent traffic statistics portraying the role of self-propelled, oceangoing dry-cargo vessels are either not available or where available lend themselves only to a superficial analysis.[5] More reliance can be placed upon vessel deadweight tonnage on the routes for which adequate traffic data are not available, since it may be assumed that some relationship exists over the long term with respect to the amount of shipping employed and the volume of available traffic.

Annual overall United States domestic waterborne commerce data compiled by the Corps of Engineers indicate an almost uninterrupted increase in traffic volume, with the exception of the post-World War I depression years and the World War II years when much of the coastal shipping was diverted to the foreign trade. The trend is roughly portrayed as follows: 1921, about 239 million tons; 1929, approximately 456 million tons; and 1950, slightly more than 651 million tons. The amount of self-propelled oceangoing shipping employed in the domestic trade also showed a somewhat similar trend. In 1923, it amounted to 3.4 million gross tons [6]; in 1930, it totaled 3.9 million gross tons; in 1939, it reached almost 4.3 million gross tons; and in 1952, it totaled 4.1 million gross tons, a figure which, on a speed-tonnage basis, would provide greater carrying capacity than in 1939. Such data imply that shipping on deep-sea domestic trade routes has enjoyed a substantial long-term growth. For certain segments of the trade, such as the tanker and the dry-cargo bulk carrier, that implication is correct, but for other segments, notably the dry-cargo freighter and the passenger-carrying vessel, the opposite is true.

In order to understand recent trends in vessel employment in the United States domestic trades it is necessary to examine the various trades separately as well as combined. A series of four tables is presented for that purpose. The first table presents the employment of such vessels on an overall basis while the following three tables depict vessel employment separately for the coastwise, intercoastal, and noncontiguous trades. For uniformity, these data are shown as of December 31 for the years included.

(*a*) *Total domestic employment.*—The following table shows the trend in vessel employment in the overall domestic trade:

[5] Coastwise data prepared by the Corps of Engineers do not segregate traffic by major routes and include traffic carried by barge and self-propelled vessels of all sizes. Traffic statistics compiled by the Interstate Commerce Commission also include barge traffic and local traffic and reflect only the commerce of regulated carriers. The Maritime Administration has compiled intercoastal traffic figures for the intercoastal trade through the calendar year 1952, but its traffic data for the noncontiguous trades have not been resumed since it was suspended in 1940. Finally, none of the data are available by type of carrier. As a consequence, the domestic trade shipping statistics included in this report with the exception of those on intercoastal shipping are of limited value.

[6] Given in gross tons because deadweight tonnage figures are not available prior to the year 1932.

Self-propelled ships of 1,000 gross tons and over employed in the United States deep-sea domestic trade

Year, as of Dec. 31—	Total		Dry cargo		Tanker	
	Number	Deadweight tons	Number	Deadweight tons	Number	Deadweight tons
1939	805	6,900,000	467	3,152,000	338	3,748,000
1948	429	4,415,000	151	1,459,000	278	2,956,000
1949	485	6,186,000	192	1,838,000	293	4,348,000
1950	453	5,801,000	179	1,761,000	274	4,040,000
1951	475	6,173,000	180	1,707,000	295	4,466,000
1952	478	6,393,000	170	1,697,000	308	4,696,000

This table shows that the United States deep-sea domestic fleet declined only slightly on a deadweight tonnage basis between 1939 and 1952. However, this generalization is misleading since a sharp reduction has occurred in dry-cargo shipping while a substantial increase in tanker tonnage has taken place. In 1939 the amount of dry-cargo shipping was not far below the tonnage of tanker shipping; in the postwar years, however, a marked change occurred in the relationship between dry-cargo tonnage and tanker tonnage in favor of the latter. This change is of national defense significance since the coastwise trade in both World Wars was an important source of dry-cargo shipping which was diverted to foreign trade operations.

(*b*) *Coastwise employment.*—The following table depicts the recent trend in vessel employment in the United States deep-sea coastwise trades:

Self-propelled ships, of 1,000 gross tons and over, employed in the United States deep-sea continental coastwise trade

Year, as of Dec. 31—	Total		Dry cargo		Tanker	
	Number	Deadweight tons	Number	Deadweight tons	Number	Deadweight tons
1939	568	4,807,000	252	1,303,000	316	3,504,000
1948	325	4,327,000	56	483,000	269	3,844,000
1949	345	4,576,000	78	652,000	267	3,924,000
1950	334	4,515,000	71	616,000	263	3,899,000
1951	356	4,960,000	67	568,000	289	4,392,000
1952	356	5,086,000	62	580,000	294	4,506,000

This table indicates that the deadweight capacity of the vessels engaged in the continental deep-sea coastwise trade was slightly greater in 1951 and 1952 than it was before the war. It shows this trade suffered a greater reduction in dry-cargo shipping than the domestic trades as a whole—63 percent as compared to about 46 percent. On the other hand, the continental coastwise tanker fleet accounted for virtually the entire increase in the tanker tonnage employed in the United States domestic trades between 1939 and 1952. It should be stressed that the tanker fleet in these trades has increased almost uninterruptedly during the past several decades.

(*c*) *Intercoastal employment.*—The following table presents the recent trend in the size of the fleet engaged in United States deep-sea intercoastal trade.

Self-propelled ships, of 1,000 gross tons and over, employed in the United States deep-sea intercoastal trade

Year, as of Dec. 31—	Total		Dry cargo		Tanker	
	Number	Deadweight tons	Number	Deadweight tons	Number	Deadweight tons
1939	165	1,576,000	150	1,406,000	15	170,000
1948	45	502,000	43	475,000	2	27,000
1949	82	1,051,000	58	652,000	24	399,000
1950	67	755,000	64	712,000	33	43,000
1951	57	635,000	54	591,000	3	44,000
1952	57	664,000	49	548,000	8	116,000

This table shows that the intercoastal trade has declined substantially—almost 73 percent between 1939 and 1952. This decline is accounted for by the predominance of dry-cargo ships in this trade. Since the comparison is on a deadweight-tonnage basis, it does not reflect the higher speeds at which postwar ships are operated; however, the speed factor would not offset this substantial decrease.

(*d*) *Noncontiguous employment.*—Ships employed in the noncontiguous trade operate between ports in the continental United States, and ports of Alaska, Hawaii, and Puerto Rico. This trade is prohibited to foreign shipping as is the coastwise and intercoastal trade.

The following table is presented to indicate the change that has occurred in the size of that fleet since 1939:

Self-propelled ships of 1,000 gross tons and over, employed in the United States noncontiguous trade

Year, as of Dec. 31—	Total		Dry cargo		Tanker	
	Number	Deadweight tons	Number	Deadweight tons	Number	Deadweight tons
1939	72	517,000	65	443,000	7	74,000
1948	59	586,000	52	501,000	7	85,000
1949	58	559,000	56	534,000	2	25,000
1950	52	531,000	44	433,000	8	98,000
1951	62	578,000	59	548,000	3	30,000
1952	65	643,000	59	569,000	6	74,000

The table indicates that in marked contrast to the continental coastwise and intercoastal trades the tonnage of the dry-cargo fleet operated in the noncontiguous trades has increased rather substantially and has experienced a fairly steady but gradual increase over the past three decades. This growth can be expected to continue in view of the nature of the commodities transported and freedom from competition of other types of transportation. Tanker traffic is variable, but these apparent fluctuations may have resulted from the use of December 31 as representative of the year.

3. Future shipping requirements

Factors entering into a projection of a long-range forecast of United States waterborne commerce and of the size and type of the United States-flag merchant fleet are many and varied, they are difficult to evaluate in the light of abnormal prewar and postwar economic and

political conditions such as depressions, wars, booms, and their accompanying adjustments. Moreover, changes have occurred in the employment of vessels and in the volume of traffic on certain trade routes which have resulted in changes in the demand for certain types of vessels. Currency restrictions as well as efforts by various countries to influence the flow and amount of their foreign commerce have and will continue to exert far-reaching influence on United States foreign trade and American-flag shipping. As a consequence, no simple method of forecasting traffic volume and vessel employment can be employed since there is no apparent relationship between trends in population, gross national product, or other such elements which are often used for forecasting purposes and traffic or vessel employment. The wide and inconsistent fluctuations in traffic are indicated by the following examples:

1. Tanker inbound carryings have increased from 9 million tons in 1938 to 51.5 million tons in 1952, or nearly 600 percent.

2. Tanker outbound carryings have been decreased from 21.5 million tons in 1938 to 10.9 million tons in 1952, or about 50 percent.

3. Dry-cargo liner exports for the years 1948 through 1952 exclusive of ECA/MSA traffic carried by liners show only a relatively small increase over dry-cargo liner exports carried during 1937 which was the best year of the depression years except for 1930. Indeed, it appears that the outbound traffic carried by dry-cargo liners during several of the years in the 1920's may have been greater than that carried by liners in the postwar years exclusive of ECA/MSA traffic.

4. United States-flag tanker carryings, both outbound and inbound, between 1948 and 1952 show little or no increase, but the carryings of foreign-flag tankers, especially inbound to the United States, have increased very substantially during that period of time.

5. Passenger-carrying vessels in the United States deep-sea domestic trades have been substantially reduced in number; in some of those trades they have disappeared.

6. Package freight vessels in the deep-sea continental coastwise and intercoastal trades have been greatly reduced in number.

7. Dry-cargo liner imports, excluding those transported by industrial carriers, show no increase over those moved in 1937.

Other marked changes in the deep-sea waterborne commerce of the United States have occurred, but these are indicative of the divergent trends in various segments of these trades, pointing to the tenuous nature of any long-range estimate of traffic and in United States-flag vessel employment. Moreover, any estimate is further complicated by the fact that our fleet engaged in foreign trade includes a large number of subsidized vessels and their future depends upon legislative policy; also the fleet includes a large number of nonsubsidized vessels whose employment depends largely or in part upon the cargo preference provisions of our foreign-aid programs.

All factors considered the United States-flag merchant fleet may do well to maintain its present employment. Tramp-type operations can be maintained only if they receive Government aid either on the present or some other basis. The dry-cargo liner segment is expected to do no better than hold its present position. Outbound liner traffic, exclusive of ECA/MSA traffic, appears to have had little or no increase for the past 30 years. Inbound liner traffic, which includes the carryings of industrial carriers, has shown an increase. However, this

increase has been accounted for to a great extent by the tonnage of industrial carriers. The active tanker fleet is likely to increase in size over the long term, but it is doubtful if this will occur in the near future. There is a current surplus of tankers, both United States-flag and foreign-flag, which is expected to continue for several years. Passenger-carrying vessels have been eliminated from the continental coastwise trades and the intercoastal trade and have been substantially reduced in the noncontiguous trades. Passenger carriers in foreign trade also face growing competition from air carriers, a situation which still is too new to be entirely resolved. Additional ore carriers may be required in the future, but it is not known at the present time whether or not these ships will be operated under American or foreign registry. To assure the continued movement of essential ores, particularly in periods of international emergency, a substantial portion should be carried in United States-flag ships.

The present shipping outlook therefore is too confused to permit a clear picture of the future ahead, but under present conditions the outlook is not bright for much increase in overall vessel United States-flag employment. In view of the many imponderables in the outlook for future traffic and the availability of the reserve fleet to meet unexpected emergencies, the present size of the active fleet appears adequate for present and reasonably expected future trade.

C. NATIONAL DEFENSE REQUIREMENTS

1. Mobilization

Full mobilization requirements for merchant-type oceangoing ships and an inventory of vessels considered under "effective United States control" are furnished periodically to the Department of Commerce by the Secretary of Defense.[7] The above information is developed by the armed services, reviewed and evaluated by the Joint Chiefs of Staff and made available to the Maritime Administration for purposes of mobilization planning. The inventory of availabilities as of any given date include (1) the active operating fleet of United States-flag ships; (2) selected foreign-flag ships owned by United States citizens or their affiliates;[8] (3) ships laid up in the national defense reserve; and (4) ships under construction as of the inventory date.

The above studies also include requirements for ships to be converted to military auxiliaries. Initially this program draws heavily on the better ships in the active and laid-up fleets, but since the total requirement cannot be met from existing ships a substantial construction program is planned in the post-M-day period. This program, spread over 3 years, is known as the maritime mobilization shipbuilding program and is set forth in exhibit A of the classified annex. Although the program is predicated largely upon the need for naval auxiliaries, some general lift ships are included therein. The success of the program will depend upon the availability of such critical components as high-pressure turbines, boilers, gears, valves, and controlled

[7] A classified paper relating to the current war plans, which was first presented in 1945 when the Ship Sales Act of 1946 was being considered, established the basis for the number and types of ships to be maintained in the reserve fleet for defense purposes. This has been revised annually and expanded in recent years to include total merchant ship requirements under full mobilization.

[8] In addition to the United States-flag ships, certain ships controlled by United States citizens and registered under the flags of Panama, Honduras, Liberia, and Venezuela are deemed to be available under mobilization conditions. The term "effective United States control" covers only this category of shipping.

materials as well as production facilities. The demand for these items when combined with other military demands for related production may force the acceptance of a reduction in desired ship characteristics until deficiencies are overcome.

The reserve fleet is critically deficient with respect to speed since as of December 31, 1952, it contained 1,427 Liberty types having a speed of only 10 and 11 knots. Further, there are no large tankers in the reserve fleet. This lack of speed and the complete absence of oceangoing tankers in the reserve fleet increases the magnitude of the mobilization shipbuilding program.

2. Minimum nucleus active fleet

Estimates of merchant-type vessels required to be in active operation to meet initial (first 90 days) military and civilian mobilization needs are based upon plans of the Joint Chiefs of Staff. Included in the factors which are considered in determining the size of this fleet by types of ships are: (1) the immediate availability of ships in position to lift scheduled cargo; (2) assumptions as to the time needed for ships to arrive in position to assume their missions; (3) speed with which reserve fleet ships can be reactivated; (4) suitability of commercial ships to put to sea under convoy or other military security plans; (5) amount of priority oceanborne cargo to be moved; (6) availability of foreign-flag merchant ships under "effective United States control"; (7) estimated accumulated vessel losses; and (8) available military vessles to meet certain emergency requirements. These plans are under continuous review and are kept up to date in the light of changing world conditions.

The Joint Marad-Navy Planning Group which was formed to study this problem has concluded that as of December 31, 1952, the active merchant fleet under United States control was deficient by 261 notional dry-cargo freighters of 10,000 cargo measurement tons and 10 knots (equivalent to 69 Mariner-type and 127 Bland-type ships); 26 notional tankers of 16,500 deadweight tons and 15 knots (equivalent to 6 T–5 type and 10 commercial type vessels operating at 18 knots); and 8 passenger-carrying ships of the *Independence* type.

The size of the active fleet as well as the mobilization requirements for an active fleet are based on conditions as they exist as of a given date. Therefore, the deficiency, if any, which exists in the size of the active fleet for initial mobilization requirements will vary depending upon the date selected.

The Joint Marad-Navy report of the size of the operating merchant fleet under United States control necessary to meet initial mobilization requirements is now being considered by the Department of Defense and the Maritime Administration. Since it is doubtful that any substantial number of ships in addition to the number already in operation can be operated profitably under the United States flag even with subsidy, the mere construction of the ships would offer no solution to the problem.

Other alternatives may be available which will enable the fleet to meet initial mobilization requirements. The most desirable method from many points of view is the replacement of units now being operated with modern, faster ships and the upgrading of the Nation's defense reserve with replaced vessels of better type. Other alternatives include: (1) The possibility of increasing the rate of reactivation

of ships from the reserve fleet; (2) the establishment of a ready reserve fleet; (3) improve the maintenance of ships in the reserve fleet; (4) modernizing ships presently in the reserve fleet; (5) arrange for the utilization of more foreign-flag tonnage during initial mobilization; (6) expand the opportunities for dry-cargo ship employment in the domestic trades; (7) improve shoreside and shipboard cargo-handling facilities to improve port turnaround. In addition a sound, stable, healthy shipbuilding and ship-repair industry must be maintained.

It should be clearly understood that any deficiency in the shipping under the control of the United States for initial mobilization needs, including both active and reserve ships, is one primarily of quality rather than quantity. As the Department of Defense stated recently in hearings before the Potter subcommittee:

> It is important to note that, while the total national defense fleet (active and reserve) is deficient only to a minor degree to meet initial defense requirements from a quantitative point of view, there is a serious deficiency from a qualitative point of view.[9]

The problem of quality is not too serious insofar as the active fleet is concerned because it is now composed for the most part of ships which operate at relatively high speeds and are suitable for military purposes. Only relatively few Liberty vessels are still in active operation. The serious deficiency from a qualitative view referred to in the Department of Defense statement relates primarily to the reserve fleets where practically all the vessels are of the war-built Liberty type. These vessels are considered too slow for modern military needs. On the other hand, all but 34 of the 196 troop transports in the reserve fleet are of the higher speed types and should be suitable for military purposes.

In summary, it is concluded that on December 31, 1952,[10] the size of the active United States merchant fleet was very close to adequate, for initial mobilization requirements. While there is no margin of safety, the ability of the active merchant fleet to meet more fully the requirements of defense planning will be enhanced as new and more efficient ships take the place of the old and obsolete units. Improvement in other factors previously mentioned affecting the size of the merchant fleet required in active operation for national defense purposes will also enhance the national defense potential of existing vessels.

3. Reserve fleet

Section 11 (a) of the Merchant Ship Sales Act makes the Maritime Administration responsible for the care and custody of ships placed in the national defense reserve fleet. From the latter part of 1945 until the present, 5,179 ships entered the reserve fleet and 3,124 were withdrawn for a variety of reasons including sale, charter, agency operation, delivery to the military, and scrapping. As of December 31, 1952, there were 1,974 merchant-type ships in the reserve fleet. Appendix table 11 shows a listing of these ships by type and fleet location. Appendix table 12 shows the same information in deadweight tons.

[9] Merchant Marine Studies, hearings before Senate Committee on Interstate and Foreign Commerce, 83d Cong., 1st sess., pt. 1, p. 66.

[10] The use of a December 31, 1953, inventory of United States flag ships would not alter significantly this conclusion, since the number of ships under the United States flag did not decline materially since December 31, 1952.

(*a*) *Purpose.*—The act further provides that " * * * all vessels held in such reserve shall be preserved and maintained for the purpose of national defense." On several occasions since the establishment of the reserve fleet the Department of Defense has been consulted as to the necessity for maintaining the ships in the reserve fleet and, with the exception of agreeing to the disposal of a few old or badly damaged ships, the Department of Defense has consistently maintained that all of the ships should be maintained and preserved. This position has been recently confirmed in a letter dated April 24, 1953, addressed to the Under Secretary of Commerce for Transportation by the Acting Secretary of Defense. (See exhibit B, classified annex.)

(*b*) *Selection of fleet anchorages.*—In the selection of reserve fleet sites consideration was given to the following factors:

(1) Locations close to the principal ports where the ships would end their last voyages.

(2) Proximity to repair facilities. With the exception of Wilmington, N. C., each location is situated close to the largest shipping centers on each coast and close to ship repair facilities that would be utilized in reactivating the ships in time of emergency. Ships to be reactivated from the Wilmington, N. C., fleet will have to be towed to the Newport News, Va., area or to Charleston, S. C., or Jacksonville, Fla., repair facilities.

(3) Other factors of site location: In selecting the specific sites full consideration had to be given to mooring the ships in areas not exposed to high winds, high tides, excessive current flows, areas where sufficient manpower would be available to carry on the preservation work, and areas where local opposition would not be too great. Another factor in selecting the sites was water as fresh as possible; however, since the development of cathodic protection this point would no longer be a factor.

(*c*) *Composition of individual fleets.*—Three fleets were established on the Atlantic coast, two on the gulf coast, and three on the Pacific coast in anticipation of the numbers of ships that eventually would be held in permanent reserve in the three areas. In nearly all instances ships were placed in the fleets nearest to the ports where they were taken out of service. If they are reactivated they will utilize the same facilities (drydocks, repair yards, etc.) needed during deactivation. Particular care was taken to obtain the proper distribution of types between the fleets on a single coast, and for a period of a year or so a number of ships homeward bound on their last voyages in the Atlantic were diverted to the gulf to balance out the fleets on both of these coasts.

It should be noted that 204 military auxiliaries have been redelivered by the armed services to the Maritime Administration reserve fleet. Of these, 103 are in the James River fleet and 72 in the Suisun Bay fleet. These two fleets are close to the Navy's largest bases at Norfolk, Va., and Mare Island, Calif., where these ships would be reactivated.

(*d*) *Condition of ships.*—The term "condition" as used herein refers to the repair status of a ship from wear or damage. Of the 2,055 merchant-type ships in the reserve fleet as of November 30, 1953, some 664 were returned within the last 18 months with all voyage

repairs accomplished. When these ships are again required for service, there will be little or no delay in reactivation for repairs.

The remainder of the ships are in various conditions of repair. During the first 2 or 3 years following World War II, voyage repairs (other than to insure watertight integrity) were not made at the time vessels entered the reserve fleet as it appeared that there might be as many as 1,000 to 1,200 ships in excess of the requirements for national defense. It was not considered justifiable to expend funds for repair while there existed the probability that many of the ships would be scrapped. Sales of ships to friendly foreign nations greatly exceeded the number anticipated, with the result that when foreign sales were terminated on March 1, 1948, all remaining war-built ships except those badly damaged were retained to meet requirements for national defense.

The condition of the 1,391 ships deactivated prior to the Korean emergency are grouped as follows according to the estimated costs of repair and reactivation:

Ships requiring normal ($100,000) reactivation expense only	531
Ships requiring repairs of less than $100,000 in addition to normal reactivating expense	763
Ships requiring repairs of over $100,000 in addition to normal reactivating expense (most of the ships in this group require less than $200,000 repairs)	97
Total	1,391

(*e*) *Preservation of ships.*—The Maritime Administration has had a specific program for custody and preservation since the several fleets came into existence, but due principally to decreased appropriations in the past few years the program has been curtailed. This preservation program is believed to be the most economical and practicable for maintaining the ships. It consists of three principal operations: (1) The original layup and preservation of a ship after delivery to a reserve fleet, known as basic preservation; (2) periodic renewal of the basic work, known as recurring preservation; and (3) protection of the underwater hull, known as bottom preservation.

Of special interest is bottom preservation by means of the cathodic method. Cathodic protection employs an established principle of chemistry in the protection of underwater ship hull plates, viz, that a flow of direct current to the receiving metal will overcome and neutralize the electrochemical actions on the metal which cause corrosion and pitting. In its application to reserve fleet ships, electric current is passed through anodes and thence through the water to the hulls. The anodes are placed around and underneath the ships.

Cathodic protection has been proven completely effective; once a system is installed, corrosion on the underwater section of the ships' hulls is halted. Taking into account every expense in connection with installing, operating, and maintaining the systems of the eight fleets, the cost of cathodic protection will average $375 per ship per year. This compares with an average cost of $1,850 per ship per year if the ships were drydocked and the underwater hull plates sandblasted and painted every 6 years. The savings in the use of cathodic protection as against the traditional method of painting is in excess of $3 million per year.

If Congress appropriates the amount requested for the fiscal year 1955, the cathodic system for bottom protection will be installed in the

two gulf coast fleets next year. Similar installations were made in fiscal year 1953 at the 3 Atlantic coast fleets and are being made in fiscal year 1954 at the 3 Pacific coast fleets. Thus, bottom protection will then be complete and the hulls of all ships fully protected against corrosion if present programs are implemented.

As of the end of the current fiscal year, there will be a backlog of 557 man-years of basic preservation and a backlog of 401 man-years of recurring preservation. With respect to basic preservation, this means that there will be some 290 ships in the fleets for periods up to 2 years upon which the basic lay-up has not been performed. Basic preservation should be performed within 8 months after a ship is delivered to a fleet; otherwise serious deterioration is likely. With respect to recurring preservation the backlog represents work such as represerving the boilers, engines, and machinery, some of which is from 2 to 3 years overdue. This delay also can result in serious deterioration. Funds requested for the fiscal year 1955 for manpower and materials for preservation are approximately $3,100,000. An additional $1,700,000, if made available in fiscal years 1955 and 1956, would permit the preservation program, both basic and recurring, to be current as of the end of fiscal year 1956. After that date, the annual expense for manpower and materials for preservation would be approximately $2,800,000, assuming all ships remained in the fleets and there were no substantial increases in wage rates and material costs.

(*f*) *Maintenance cost.*—Funds appropriated for the fiscal year 1954 and requested for the fiscal year 1955 for categories of purpose are as follows:

Purpose	Fiscal year 1954	Fiscal year 1955
Preservation manpower and materials	$3,271,000	$3,095,000
Personnel—fleet officers, clerical force, first aid	487,000	486,000
Maintenance and operation of tugs, barges, and working craft	723,000	704,000
Personnel—security patrol	753,000	754,000
Installation of cathodic systems	1,200,000	1,136,000
Miscellaneous	566,000	525,000
Total	7,000,000	6,700,000

When the bottom protection cathodic systems are completed, and if and when the basic preservation backlog is completed, the yearly expense to operate the reserve fleet, maintaining the recurring preservation on schedule, will be about $6,120,000. This would be an average of about $2,915 per ship per year for all expenses.

The annual cost for various preservation and reserve fleet activities on a ship basis is as follows:

Cost of completing basic preservation on the average ship	$8,000
Annual cost of recurring preservation on the average ship if all recurring preservation is performed on schedule	1,340
Annual cost of bottom cathodic preservation for the average ship, amortizing the cost of the installations	375
All other annual costs (operation and maintenance of tugs, barges, security patrols, staff, and office force, (etc.), average per ship	1,200

(*g*) *Reactivation of ships.*—It would appear that planning for a national emergency (war) cannot avoid the assumption that the outbreak will be an act of aggression without warning from an enemy

nation and that few if any reserve fleet ships will have been reactivated in anticipation of such outbreak.

Immediately thereafter, United States repair facilities and manpower will be in the heaviest demand for (*a*) servicing the active United States-flag ships and United States Navy ships; (*b*) servicing the naval and merchant ships of allies; (*c*) repairing damage from enemy action of naval and merchant ships; (*d*) reactivating laid-up naval ships; and (*e*) reactivating laid-up merchant ships.

(1) Reactivation factors: The phased reactivation of ships from the reserve fleet in time of a national emergency is contingent upon several fundamental factors, the most important of which are the availability of (a) harbor and deep-sea tugs to move ships from reserve fleets into repair yards; (b) active drydocks in repair areas; (c) active repair facilities to effect reactivation; (d) trained repair manpower in yards to effect repairs and reactivation work; (e) outfitting equipment and material requirements; (f) repair facility potential capable of rapid expansion to cope with increased workload; (g) manpower, both trained and untrained, capable of meeting expanded workload in repair yards; and (h) licensed and unlicensed personnel to man the ships during the reactivation period. Reactivation is dependent on a balanced expansion of these factors consistent with workload requirements.

To meet the requirements of the Department of Defense in time of a national emergency, when ships would be reactivated for operation to meet tonnage deficits in the operating fleet, there must be in existence a base of operating ships, ships in reserve, active ship repair facilities, and repair manpower, tugs, outfitting material and an adequate supply of seagoing personnel.

(a) Number of tugs: Should the demand for shipping decline, the number of tugs that can be employed profitably will diminish. Tug owners may elect to scrap or sell for foreign operation those in excess of their current needs. The number of tugs that can be made available for towing ships from the fleets to repair yards may be a controlling factor in reactivation of reserve fleet ships.

There are 46 V–4 seagoing tugs in the reserve fleet. In order to utilize all repair facilities, it will be necessary that ships be towed from reserve fleets to repair yards at points such as Boston, Baltimore, Charleston, Jacksonville, New Orleans, and Galveston. If a repair program is authorized in the future, consideration should be given to placing some or all of these tugs in full repair.

(b) Drydocks: At present there are 70 drydocks, capable of taking a Liberty ship or larger, in the United States exclusive of those in Navy yards. Of this number, 20 are in New York Harbor. The availability of drydocks is one of the controlling factors in the speed with which reserve fleet ships can be reactivated. For example, if the New York Harbor area were knocked out by enemy action, the effect would be crippling. Further, if a post-M-day modernization program of Liberty ships is undertaken the demand for drydocks will be greatly increased.

Total estimated drydock requirements and availabilities should be studied and appropriate recommendations submitted.

(c) Repair facilities (exclusive of drydocks): Much has been written about the shrinkage of the repair industry and its effect in an emergency. Probably the most serious effect will be the loss of skilled workers and supervisors upon whom the ability to rapidly expand would depend. Work projects designed to bolster the economy could well include a program for the modernization and repair of reserve fleet ships.

(d) Outfitting equipment: All durable, nonperishable tools and equipment have been left aboard ships in the reserve fleet. All perishables and semiperishables have been removed. The reoutfitting of hundreds of ships in a brief period will require quantities of items, such as manila rope and tarpaulins, that may be in excess of production capacity. Some stockpiling is indicated.

When new ships were outfitted during World War II the allowance lists were heavy with respect to some hard-to-get items. A study might be made at this time to insure that all items in such lists are actual necessities.

(e) Officers and crews: One of the advantages of the Liberty ship is that engineers and engine crews can be trained in a very brief time to operate the engines and machinery. In contrast the operation of turbine, turbine-electric, and all high-pressure engines call for highly skilled engineers. This fact should not be overlooked when plans for high-speed ships are discussed.

(*f*) *Requirements.*—By far the most serious deficit of the reserve fleet is the lack of tankers necessary to meet the needs which would be created by a grave national emergency. This deficiency is recognized by all who have studied the situation. This problem may be solved in several different ways. Dependence could be placed upon our ability to produce in time of emergency a large number of tankers. This course would obviously impair other vital defense production. Alternatively, we could stockpile in peacetime the entire number of tankers needed to meet estimated mobilization needs. A middle course, however, has been generally held a more practical approach to the problem. Consequently, the so-called trade-in-and-build tanker program was presented by the Secretary of Commerce to the Congress in July of 1953, a program which should be actively pursued. Additionally, the Military Sea Transportation Service has under consideration the chartering of newly constructed tankers and at the same time transferring Government-owned currently active T–2 tankers to the reserve fleet.

Apart from the serious tanker shortage, the reserve fleet from the standpoint of numbers is considered adequate. However, the speed deficiency of the dry-cargo ships in the national defense reserve is of such magnitude as to limit their mobilization employment.

In order for the reserve fleet to serve its purpose, in time of national emergency it is essential that all required preservation work be completed at the earliest possible date. Sufficient funds should be appropriated to complete required preservation work, and to assure that the ships will thereafter be maintained so that if needed they will be in sound condition.

II. Shipyards And Shipyard Requirements

The study and analysis of shipyard capacities, requirements, and deficiencies is confined to coastal yards capable of constructing oceangoing ships 400 feet in length and over [11] Historically our shipbuilding problems have been confined to ships of this size The Great Lakes and inland river facilities are not included in this study, since large ships which might be constructed in these areas cannot be economically placed in ocean service. Both World Wars have demonstrated this. Inland shipbuilding facilities have been traditionally used for local construction or for smaller craft.

A. SHIPBUILDING CAPACITY

The volume of shipbuilding in United States coastal shipyards varies directly with the national requirements and with the decline or growth of the United States merchant marine. While this fact is self-evident a historical review of shipyard business is desirable. Appendix table 13 shows merchant ship construction of oceangoing ships over 1,000 gross tons in United States shipyards from 1914 to 1956, with the period from 1953 to 1956 being a projection on the basis of existing construction contracts.

An analysis of our merchant ship construction during this period results in these basic observations: (1) Shipbuilding is a sharply fluctuating industry. Most of the construction took place as a result of wartime activities. (2) World War I shipbuilding was slow in getting underway, so that few ships were completed during the war itself and the huge program was completed during the 3 postwar years. (3) The Merchant Marine Act, 1936, was instrumental in developing the shipbuilding industry so that 95 ships were delivered during 1941. This construction program was one of the reasons for being able to deliver promptly over 4,000 ships during World War II. (4) The post World War II construction has fluctuated. While a considerable number of ships was completed and are still scheduled for delivery, approximately 50 percent of these ships since 1947 have been or are scheduled for foreign-flag registry. This foreign-flag construction is motivated solely by the inability of the foreign yards to give prompt deliveries due to their large backlog of ship orders.

1. Operating capacity of existing shipyards

(*a*) *Present level of output.*—The following tables provide a summary of the oceangoing merchant ships over 1,000 gross tons built or building in United States shipyards since the conclusion of World War II, shown by major types as of September 1, 1953.

[11] It must be stressed that shipyards constitute only a part of the shipbuilding industry. According to the 1945 Harvard Graduate School of Business Administration report, entitled, "The Use and Disposition of Ships and Shipyards at the End of World War II," "Shipyards do not comprise the whole shipbuilding industry. They are the establishments which perform the final assembly, repair, and outfitting of both merchant and fighting ships; in some instances they also manufacture components and develop design. The broader industry of shipbuilding in the United States encompasses the manufacture of parts and materials throughout the country, as well as the work of designing ships and the assembly and repair of ships in shipyards • • • The whole shipbuilding industry at peak activity employed an estimated 4 million workers. The manufacturers of the wide variety of materials and components which go into the finished ships are spread throughout the country and employed at the peak of wartime activity an estimated 2,300,000 workers."

Oceangoing merchant ships of 1,000 gross, built or building, 1946–55

Year built	Total [1]		Tankers		Cargo		Passenger-carrying ships	
	Number	Dead weight tons	Number	Dead weight tons	Number	Dead weight tons	Number	Dead weight tons
		Thousands		*Thousands*		*Thousands*		*Thousands*
1946	79	920.4	9	116.7	62	719.0	8	84.7
1947	38 (17)	316.0	3	33.0	28	215.5	7	67.5
1948	20 (11)	236.0	4	79.7	15	145.8	1	10.5
1949	33 (30)	857.0	33	857.0	0		0	
1950	24 (19)	615.0	23	609.0	1	6.0	0	
1951	10 (3)	182.0	4	116.5	4	42.0	2	23.5
1952	16 (5)	300.0	8	204.0	7	83.0	1	13.0
1953 [2]	40 (11)	810.2	23	582.4	17	227.8	0	
1954 [2]	38 (10)	894.5	27	760.5	11	134.0	0	
1955 [2]	3	56.0	1	29.2	2	26.8	0	

[1] Number in parenthesis under "Total" represents number of ships constructed for foreign-flag account.
[2] Estimated ship deliveries; appendix table 14 is a summary of ocean going merchant ships over 1,000 gross tons under contract or construction as of Sept. 1, 1953.

The geographical distribution of United States coastal shipbuilding since World War II is as follows:

Year built	Deadweight tons (in thousands)			
	Total	East coast	Gulf coast	West coast
1946	920.4	520.1	115.1	285.2
1947	316.0	183.1	93.4	39.5
1948	236.0	178.3	47.2	10.5
1949	857.0	849.0	7.3	0
1950	615.0	615.0	0	0
1951	182.0	171.5	10.5	0
1952	300.0	286.6	13.4	0
1953 [1]	810.2	770.0	26.8	13.4
1954 [1]	894.5	840.9	26.8	26.8
1955 [1]	56.0	29.2	0	26.8
1956 [1]	0	0	0	0

[1] Estimated.

(*b*) *Geographical location.*—The existing commercial shipyards capable of constructing oceangoing ships 400 feet in length and over may be geographically summarized as follows:

Coastal area	Existing shipyards	Existing shipways
East	6	47
Gulf	3	14
West	6	20
	15	81
Currently used for Navy contracts		18
Currently available for merchant ships		63

Of these 63 shipways not all are suitable for C–3, C–4, T–5, and passenger-type ships. On M-day only 6 of the above yards and 35 of 81 commercial shipways will be available for merchant ship construction; the others by mutual agreement are to be utilized by the Department of Defense.

(c) *Maximum output.*—The maximum possible output of existing shipyards on the basis of a normal 40-hour workweek and single shift may be estimated by assuming that under these conditions each shipway will accommodate two average ships per year with the post-launching construction being accomplished at the outfitting piers. Thus, the use of the currently available 63 commercial shipways will result in 126 ships per year. Additional ships may be constructed with an increase in the workweek and number of shifts. However, the increase is not in direct proportion to the added man-hours.

2. Standby capacity of reserve shipyards

Currently there are nine reserve shipyards in various stages of usability which are available for Maritime Administration mobilization programs. Two of these reserve yards are adjacent to existing private shipyards. These 9 reserve yards will require from 2 to 9 months to reactivate at a cost ranging from $1 million to $30 million each. In the event any reserve yard is activated to a standby condition (ways and shops restored or enlarged) a yearly maintenance expenditure estimated at about $300,000 will be required.

Detailed reserve shipyard data are contained in exhibit C of the classified annex. This information may be summarized as follows:

	Number of yards	Cost to reactivate	Cost to maintain per year if activated (average per year for first 4 years)
		Mil. dol.	*Mil. dol.*
East coast	2	50.0	0.75
Gulf coast	4	70.0	1.35
West coast	3	7.0	.90
Total	9	127.0	3.00

3. Total shipyard availability

The following table indicates the total number of shipyards in the United States available for merchant ship construction at M-day. The reserve shipyards must be reconditioned.

	Total at M-day	East coast	Gulf coast	West coast
Operating shipyards	6	3	2	1
Reserve shipyards	9	2	4	3
Total shipyards	[1] 13	[1] 4	[1] 5	4

[1] 1 reserve shipyard in east coast area and 1 in the gulf area are Government property and are adjacent to operating shipyards. Therefore, they will probably be operated as single yards and the total number of yards in the tabulation reflects this fact.

B. SHIPBUILDING REQUIREMENTS

1. Replacement of commercial fleet

The active United States-flag merchant fleet as of December 31, 1952, is considered to consist of 1,264 privately owned ships and 33 Maritime Administration-owned ships operating commercially in foreign and domestic service, or a total of 1,297 ships.

A very large percentage of the present oceangoing United States-flag fleet consists of ships built during World War II. Of the 1,297 active ships in the fleet, 81 percent were constructed during World War II. That these ships are substantially of the same age is a matter of concern in any long-range program for this country. Appendix table 15 shows the present active fleet, and indicates the number of ships which would have to be built annually if that fleet were to be replaced on the basis of a 20-year ship life. This table is presented merely to highlight the block obsolescence problem.

The number of shipways necessary to construct these replacement ships on this basis is summarized as follows:

Number of shipways required to replace United States-flag commercially operated fleet on a 20-year replacement basis

Year to be started	Number of ships	Number of shipways	Year to be started	Number of ships	Number of shipways
1954 and before	87	44	1961	266	133
1955	12	6	1962	348	174
1956	8	4	1963	322	161
1957	9	5	1964	57	29
1958	28	14	1965	20	10
1959	38	19	1966 and after	27	14
1960	74	37			

The number of shipways is based on the assumption that the ships in the commercially operated fleet will be replaced as they become 20 years of age and that the average building time will be 2 years and that contracts for each ship will be awarded when each becomes 18 years old. (See appendix B for analysis of length of time required to construct ships from date of contract.) Such a replacement program, however, would only perpetuate the block obsolescence problem. The extent to which the United States is deficient in shipyard capacity for replacements to the active merchant fleet is obviously dependent upon the length of the period over which the shipbuilding program may be phased. An adequate replacement program can be phased within the capacity of presently operating shipyards. Such a policy is not only desirable but necessary since the replacement of existing ships in a 20-year life would perpetuate the block obsolescence problem and continue the fluctuations experienced in the shipbuilding industry. Under a properly phased program no shipyard deficiency should be encountered.

2. Mobilization construction

A review of mobilization or wartime requirements and availabilities of active commercial and reserve shipyards at M-day indicates that a shipway deficit will exist as outlined in exhibit D of the classified annex, even if the industry is operated on a 3-shift, 48-hour-a-week basis.

This deficit will require the construction of additional emergency shipyards at an average cost of $30 million each. It is estimated that up to 10 months will be required to construct these yards, but keels may be laid prior to this completion time. If these yards were constructed and maintained as inactive reserve yards available for mobilization, an annual expenditure of approximately $300,000 for each yard would be required.

3. Shipyard nucleus requirements

As previously indicated, only 35 of the 63 commercially active shipways will be available for merchant-ship construction at M-day. The minimum nucleus shipyard capacity required for mobilization expansion must satisfy the following conditions: (*a*) All of the 6 shipyards at which the 35 shipways are located must be active; (*b*) these shipyards must have mobilization-type ships actually under construction, with the necessary engineering completed, subcontractor channels in existence, and the subcontractor designs available—this is a primary and largely governing factor; and (*c*) sufficient commercial construction (exclusive of Navy construction programs) be underway in order to build up an adequate labor force as a basis for mobilization expansion.

In the light of World War II experience these conditions are minimum. Although the Maritime Commission was building at the rate of 1 ship every 3 days toward the end of 1941, considerable difficulty was experienced in expanding shipyard capacity to meet shipbuilding demands of World War II.

Manpower availability is considered the critical factor in meeting the nucleus requirements. These requirements, covered in more detail in another phase of this study, indicate a peak employment of approximately 435,000 workers during mobilization. Experience has shown that a ship-construction labor dilution of 12 to 1 during the mobilization buildup is the maximum that is acceptable. Consequently, a mobilization nucleus during peacetime of approximately 36,000 workers is necessary. The construction of 60 oceangoing merchant ships per year will be required to maintain this nucleus. Details of this determination are contained in exhibit B of the classified annex. It is estimated a program of 60 average ships a year can be attained at a total cost of approximately $400 million excluding national defense feature. The Government's share of this total cost will depend upon the number of ships eligible for subsidy and the construction differential rates applicable at the time of construction. Details of this estimate are shown in exhibit E of the classified annex. Since 2 ships a year can be accommodated under a normal 40-hour workweek by each shipway, 60 ships on an annual basis are within the capacity of the 63 shipways available at the present time.

C. APPRAISAL OF PEACETIME REQUIREMENTS

The size and capacity of an active shipbuilding industry required by the United States in time of peace is directly related to the maintenance of: (1) A nucleus of shipbuilding facilities and personnel for mobilization expansion, and (2) the replacement of ships in the active commercial fleet.

A planned shipbuilding program to meet these two requirements is, therefore, the desired goal. The first requirement, that of an adequate shipbuilding nucleus for mobilization expansion, is fixed by the peak mobilization demand, while the second, that of ship replacements for the active fleet, is variable within limits by lengthening or shortening the replacement period. It is apparent, therefore, that the critical consideration in the shipbuilding program is the nucleus requirement for mobilization expansion. New construction to provide replacements for the active fleet can be coordinated with a construction program designed to meet the mobilization nucleus requirement.

As already indicated, a ship-construction program of 60 average ships a year will be required to maintain a satisfactory shipyard labor nucleus. This program is well within the capacity of the 33 shipways now available, and the replacement of the active commercial fleet can be phased to this 60-vessel-a-year program. Over a 20-year period 1,200 ships would be constructed which, because of increased capacity and speed, should replace the carrying capacity of the 1,297 vessels in commercial operation on December 31, 1952.

It must be emphasized that a shipbuilding program of 60 ships a year is primarily required to meet the mobilization requirements of the Department of Defense. Under the present levels of commercial ship employment, 60 new ships a year could be physically absorbed as replacements of existing ships, but such a program for at least the next 10 years is greater than the shipping industry with its own resources will be able to undertake, even with construction subsidy aid provided under present existing statutes. Considerable additional Government assistance and incentive would be necessary for private industry to attain a 60-ship-a-year construction program in the next 10 years. However, this program in addition to meeting both shipbuilding nucleus requirements as well as the replacement needs of the active fleet, would solve in large measure the block obsolescence problem created by the mass construction of ships during World War II.

The shipyard manpower requirement which is the basis of the 60-ship-a-year construction program does not take into consideration the possibility of reduced mobilization requirements resulting from technological advances and improvements unless such improvements are already incorporated in the models planned for mobilization production. Research and development efforts in the fields of cargo handling and marine propulsion offer real possibilities for marked improvements in the efficiency of ocean transportation. If such efforts are successful as to size, speed, and utilization, merchant-type ships may be altered substantially. Unfortunately, firm developments in these fields are not sufficiently close at hand to serve as a basis for current mobilization planning or to affect the 60-ship-a-year requirement outlined.

The following table shows for various annual levels of shipbuilding the estimated effect on the number of ways which would be used, the number of production workers which would be employed, the deficiency of production workers for mobilization needs, the cost of the ships, and the approximate number of years which would be required to replace the privately owned fleet needed for mobilization purposes.

Ships per year	Ways used	Production workers	Employment deficiency estimated defense minimum	Estimated yearly delivery value	Approximate number of years to replace privately owned fleet of December 31, 1953
60	30	36,000	0	400,000,000	20
30	20	[1] 18,000–20,000	16,000	210,000,000	40
20	15	12,000–15,000	21,000	145,000,000	60

[1] Approximate 1953 employment level of shipyard production workers.

From the above table it may be concluded that: (1) every effort should be made to encourage the construction in the United States of about 60 average oceangoing merchant ships per annum; (2) should annual deliveries of oceangoing merchant ships constructed in the United States drop below 30 per annum there will be a reduction in the 1953 shipyard work force and a corresponding deactivation of facilities; (3) industrial and governmental research and development programs should be intensified and coordinated in order to improve the efficiency of ocean transportation. Mobilization requirements for oceangoing merchant ships should be adjusted promptly as any marked improvements are developed.

III. Personnel and Personnel Requirement.

A. SHIPBOARD PERSONNEL

1. Requirements

Estimated requirements based on actual manning scales including allowance for shoreside reserve for shipboard personnel by major categories for various United States merchant fleet levels may be summarized as follows: [12]

Job categories	Fleet levels			
	As of Dec. 31, 1952	M-day plus—		
		12 months	24 months	36 months
Licensed officers:				
Deck	8,588	11,850	16,621	18,321
Engineer	9,750	13,155	19,123	22,225
Total	18,338	25,005	35,744	40,546
Licensed radio officers	1,961	2,776	3,839	4,119
Unlicensed officers:				
Purser-pharmacists	1,961	2,776	3,839	4,119
Chief stewards	1,961	2,776	3,839	4,119
Total	3,922	5,552	7,678	8,238
Other personnel, skilled:				
Deck	20,465	28,418	29,070	44,065
Engineer	19,568	25,774	35,178	38,921
Cooks and bakers	5,485	8,161	11,503	12,336
Total	45,518	62,353	75,751	95,322
Other personnel, unskilled:				
Deck (ordinary seamen)	6,354	8,995	12,438	13,345
Engineer (wipers)	5,821	7,584	10,467	11,725
Mess or utility	11,105	14,730	20,995	24,116
Total	23,280	31,309	43,900	49,186
Grand total	93,019	126,995	166,912	197,411

In estimating the size of the labor force required to man a given number of ships, the number of seagoing jobs expressed by the manning scale must be increased to allow for a "shore reserve." The shore reserve consists of men temporarily off duty, on vacation, or "on the beach" for other reasons. Since World War II, there has been a definite trend toward more and more time "on the beach" for the majority of United States seamen. Increased take-home pay has

[12] See classified annex, exhibit F, for full details.

enabled the individual seamen to spend more time ashore. The shore reserve also includes some men who will not ship out again. The annual rate of attrition in peacetime is estimated at about 10 percent of the manning scale totals.

Due to the nature of seagoing employment, the rates of absenteeism and attrition are generally higher in the maritime industry than in shoreside industries. The estimated allowance for officers shoreside reserve is 25 percent and for other job categories the allowance is 35 percent. In time of war these percentages are increased, making the manpower problem more acute.

2. Availability

Under normal peacetime conditions, when the size of the merchant fleet, the number of available seafaring jobs, and the output of maritime training facilities are more or less stabilized, no serious recruitment or manning problems are encountered, at least in terms of quantity. Quality, of course, depends in some measure on the kind of training given and the number of men participating in the training program.

The nature of the manpower problem is quite serious when the size and activity of the fleet are increased to the point where demand for personnel exceeds supply. When a need for more seamen develops, few are immediately available, in spite of what appears to be an ample supply of trained and experienced men.

In August 1945, when the peak of World War II ship activity was reached, there were 168,000 jobs in the merchant marine. From 1938 to 1945, inclusive, the Coast Guard issued approximately 700,000 original documents to licensed and unlicensed officers and seamen, over 4 times the peak manning scale total. This number includes only the intake of new men, and does not include men documented prior to 1938.

Despite the apparently adequate supply throughout this period there were chronic shortages of manpower, particularly among skilled ratings, both licensed and unlicensed. The shortages were evidenced in many delayed sailings, and in the issuance of many waivers by the Coast Guard to permit men to sail in billets which called for a higher rating or license than these men held.

A similar situation existed during the Korean emergency, accentuated by a marked increase in other types of foreign shipments. On February 1, 1952, there were 99,750 jobs on deep-sea ships of over 1,000 gross tons. In the preceding 18 months, from August 1950 through January 1952, the Coast Guard issued 278,000 "validated for emergency service" documents to seamen after security clearance, a ratio of men to jobs of slightly less than 3 to 1.

During the month of January 1952, when the active fleet was composed of approximately 1,950 ships, the Coast Guard issued more than 1,400 waivers. Even during that month, about 9 months after the National Shipping Authority began to take ships out of the reserve fleet to meet extraordinary coal and grain movements, 109 ships operating under general agency agreements were delayed by crew shortages for an aggregate total of 942 days, an average of almost 9 days per ship, at an estimated total cost to the Government of $1,221,000.

The Maritime Commission during World War II trained approximately 7,000 radio operators. To meet Korean needs the Maritime

Administration sent letter requests to 5,384 former radio operators, urging that they return to sea to alleviate the manpower shortage in this category. Over 85 percent of the letters were unanswered or returned undelivered. Of the 668 who replied, only 82 expressed willingness to return immediately, and only 67, or approximately 1 percent of the number to whom appeals were addressed, finally appeared for the refresher training course offered.

The availability of either experienced or inexperienced shipboard personnel is not subject to any precise statistical measurement or projection. It is known however that more personnel with sea experience must be potentially available that would appear necessary to fill the expanded manpower requirements. In view of the acute need for seamen of all ratings during mobilization, the maritime training program adopted by the Government or others must be capable of expansion to meet such requirements.

B. SHIPYARD PERSONNEL

The ability of the United States to construct ships is dependent upon: (1) shipyard facilities; (2) shipbuilding personnel; and, (3) an adequate supply of materials and components. A considerable number of shipyards and shipways is available for peacetime construction programs; in fact, current shipbuilding does not utilize all active commercial shipyard facilities. Shipways may remain unused for considerable periods of time and still be available for new ship construction. Personnel are not so constituted. They gravitate to areas of active employment.

1. Special skills required

The shipbuilding industry requires many special skills such as loftsmen, shipfitters, outside or installation machinists, and marine draftsmen and engineers. The ability to maintain these skills as well as others is dependent upon a continuing volume of shipbuilding. Where these skills are developed in the shipyards through apprentice and training program, the first reduction in shipyard work accompanied by even temporary layoffs of this type of personnel results in their seeking permanent employment elsewhere, usually in a more stable industry. Fluctuations in shipbuilding activity adds to the difficulty of maintaining a nucleus of trained and skilled shipyard personnel for wartime expansion or even for peacetime demands.

The mobilization expansion program must depend largely on the nucleus of personnel actually employed in large merchant ship construction activities. The majority of workers employed in Navy yards, repair yards, and other ship construction activities are not likely to shift their employment to other industries. All shipyards will be expanding their personnel.

Time is required to develop the levels of employment necessary for mobilization ship construction. On May 27, 1941, when the President declared an unlimited national emergency, which was prior to the United States entry into World War II, 48,700 persons were employed on Maritime Commission construction work. It was not until July 1943, or 26 months later than shipyards had their maximum production with employment of 650,400 persons. This expansion was accomplished without the problem of working under the stress of air bombardment.

2. Trend in shipbuilding employment

The table below indicates the trend in shipbuilding employment in private yards.

The increases and reductions in employment clearly indicate the erratic nature of the entire shipbuilding and ship-repair industry. The number of employees engaged in the construction of merchant ships in major coastal yards upon which the merchant ship mobilization base depends represents an important part of the total employment in the entire shipbuilding and ship-repair industry.

Total employment in the construction of merchant ships in large coastal yards is estimated to have averaged 22,300 during 1952 and to average 23,000 during 1953. This 23,000 may be compared with the Bureau of Labor Statistics report of 127,100 for June 1953, covering the entire private shipbuilding and repair industry. In 1954 it is estimated that the average employment will drop to approximately 10,800 workers. In 1955, all merchant ships now under contract will be completed and employment will drop to about 1,200 workers.

Shipbuilding employment in United States private yards

[Total direct and indirect labor in thousands]

Year	All yards including repair	Yards constructing Navy and merchant ships [1]	Construction of merchant ships only in major coastal yards [2]	Year	All yards including repair	Yards constructing Navy and merchant ships [1]	Construction of merchant ships only in major coastal yards [2]
1923	68.1			1940	102.7		
1924	55.5			1941	236.0		
1925	55.0			1942	761.7		
1926	58.0			1943	1,336.9		
1927	60.3			1944	1,242.5		
1928	47.3			1945	741.9		
1929	60.3			1946	210.0		
1930	63.9			1947	137.3	35.4	12.5
1931	49.4			1948	124.2	33.0	9.4
1932	39.7			1949	88.2	35.6	20.4
1933	33.8			1950	72.0	26.3	14.4
1934	44.4			1951	101.6	37.0	13.8
1935	48.7			1952	131.2	60.0	22.3
1936	62.4			1953	[3] 127.1	[4] 63.5	[5] 23.0
1937	67.7			1954		[4] 47.0	[5] 10.8
1938	59.2			1955		[4] 30.0	[5] 1.2
1939	72.5						

[1] Reported data which include direct labor only, adjusted by adding 20 percent to include indirect labor. Major shipyards maintained large professional, purchasing, accounting, maintenance, clerical, and other staffs usually considered as indirect labor.
[2] Estimated.
[3] June 1953.
[4] Based on the assumption of continuing Navy construction at present level.
[5] Based on current merchant ship contracts.

Source: Bureau of Labor Statistics, U. S. Department of Labor; and Shipbuilders Council of America.

3. Maximum possible employment

This study has previously indicated that there are available a total of 81 active private shipways capable of handling the construction of ships 400 feet and over, of which 18 are currently being used by the Navy, leaving 63 active shipways available for merchant ship construction. Maximum possible levels of employment using these 63 active shipways would be:

	Number of persons
Single shift	75,000
2 shifts	120,000
3 shifts	145,000

These estimates assume that construction takes place during peacetime under conditions of maximum labor output. Wartime construction would involve considerably more personnel with a loss in labor effectiveness. The estimated employment on all shifts is based on a normal 5-day workweek. The first shift, 8 hours, is considered to be fully staffed and 100 percent efficient. An allowance is made for loss of efficiency and reduced staffing during second and third shifts. On a single-shift basis it is assumed that each shipway can accomodate approximately 2 ships per year; on a 2-shift basis, 2.9 ships per way per year; on a 3-shift basis, 3.3 ships per way per year.

4. Mobilization nucleus requirements

It is estimated that a direct and indirect labor peak of 435,000 shipyard workers will be needed after M-day for the construction of merchant ships of 400 feet and over. In addition, 44,000 employees will be required for the construction of smaller merchant-type ships in the inland and Great Lakes shipyards. As a result, 479,000 workers will be required whereas about 650,040 were employed at the World War II peak. This estimate is for merchant-ship construction only and does not include Navy Department or ship repair needs.

Peacetime shipbuilding employment must provide a nucleus capable of expansion to meet these manpower mobilization requirements. During World War II, it was found that the number of workers employed in time of peace could be expanded approximately 12 times. Based on this appraisal, 36,000 workers should be employed during peacetime in merchant-ship construction. An annual construction program of 60 modern oceangoing ships will provide gainful employment for such a nucleus. It is apparent, therefore, from the discussion on work now available to the shipyards, that unless a program of new construction is undertaken promptly, the number of shipyard workers employed in merchant-ship construction will drop far below the level needed to provide a mobilization nucleus.

IV. Current Problems

This study thus far has inquired into the merchant marine and shipbuilding industries from the standpoint of our national requirements and present availabilities to meet these requirements. But what of future availabilities? In view of the serious problems facing the merchant marine, it is by no means certain that private operators can or will continue operations under the United States flag and lend investment support for a modern fleet of the desired size and characteristics. This uncertainty prevails even though there is universal acceptance of a maritime policy that stands for a merchant marine owned and operated privately with Government financial assistance to the extent necessary to guarantee the minimum requirement for national defense.

As background to a discussion of the major problems facing the industry, consideration is given first to its general financial condition which itself qualifies as a problem. The industry's financial capacity to operate and maintain an active and modern fleet tests in part the competency of existing legislation in achieving the congressional goals as expressed in national shipping policy. Private ownership and operation of the fleet will continue only so long as the industry can retain funds already invested and attract new capital.

A. FINANCIAL CONDITION

1. Subsidized operators

In common with industry generally, reinvestment of earnings is one of the principal sources of capital for the shipping industry. Profitability also is a determinant of the industry's ability to borrow funds or attract new equity capital. Earning power therefore serves to measure importantly the capacity of the industry to retain as well as attract capital.

(*a*) *Earnings.*—As a group, shipping companies receiving operating-differential subsidy have earned substantial returns on their net worth. During the postwar period, 1946–51, subsidized operators averaged 16.5 percent of net worth before taxes and 12.3 percent after taxes.[13] These average returns compare favorably with the rate of profit earned by United States manufacturing corporations, as shown in the following table:

Comparison of subsidized operator's rate of return after taxes on net worth with rate of profit after taxes on stockholders equity, United States manufacturing corporations, 1947–51.

Year	Rate of return	
	Subsidized operators [1]	United States manufacturing corporations
1947	20.7	15.6
1948	12.5	16.0
1949	11.6	11.6
1950	7.1	15.4
1951	11.5	11.8

[1] After subsidy and estimated subsidy recapture accrual.

Source: Press release, FTC, Office of Information, May 4, 1952 and May 11, 1953; Scope and Effect of Tax Benefits Provided the Maritime Industry (supplementary report), U. S. Treasury Department, Washington, D. C., Nov. 1, 1952.

As shown in the following table, profitability of individual operators, and hence their respective ability to reinvest earnings varied widely, ranging from a high of 17.8 percent after taxes to a low of minus 6.6 percent.

[13] Scope and Effect of Tax Benefits Provided the Maritime Industry (Supplementary Report), U. S. Treasury Department, Washington, D. C., Nov. 1, 1952. Percentages are after estimated subsidy recapture accrual.

Rate of return on net worth before and after Federal income taxes for subsidized operators, average 1947–51

Company	Before taxes	After taxes
	Average 1947–51 [1]	Average 1947–51
Moore-McCormack Lines	22.8	17.8
United States Lines	24.0	16.5
Grace Line	20.6	15.9
American Mail Line	17.7	14.8
Mississippi Shipping	19.5	14.5
Lykes Bros	16.9	14.3
American President Lines	14.4	10.7
American Export Lines	12.5	9.6
New York & Cuba Mail	9.4	6.3
Farrell Lines	9.4	5.9
Seas Shipping Co	6.3	5.0
Pacific-Argentine-Brazil Line	6.0	1.8
Oceanic Steamship Co	−7.2	−6.6
Total	[2] 16.5	[2] 12.3

[1] Scope and Effect of Tax Benefits Provided the Maritime Industry (supplementary report), U. S. Treasury Department, Nov. 1, 1952. After subsidy and estimated subsidy recapture accrual.
[2] 1946–51: Includes only 12 companies, 1946–48.

Source: Company reports filed with Maritime Administration.

Earnings in 1952 also appear fairly substantial as indicated by the following table. These returns are not exactly comparable with those appearing in previous tables because the basic data have not been adjusted to reflect estimated recapture accrual.

Rate of return on net worth before and after taxes for subsidized operators, 1952 [1]

Company	Before taxes	After taxes
United States Lines	34.1	29.8
Moore-McCormach Lines	26.8	18.5
Farrell Lines	19.8	17.2
Grace Line	16.4	14.0
Lykes Bros	17.0	13.9
Mississippi Shipping	13.9	13.9
American Mail Line	15.6	12.6
Pacific-Argentine-Brazil Line	12.9	11.5
Seas Sutpping Co	14.8	9.6
New York & Cuba Mail	14.4	8.0
American Export Lines	17.2	7.6
Oceanic Steamship Co	7.5	7.5
American President Lines	9.1	5.6
Combined	19.0	14.5

[1] After subsidy but before estimated subsidy recapture accrual.

Source: Company reports filed with the Maritime Administration.

It seems fair to conclude that, as a group, subsidized operators in the postwar period have with Government assistance enjoyed substantial earning power. The same conclusion is warrantedf or most of the lines individually.

Operating-differential subsidy and tax deferment account for a major share of the rather substantial earnings of subsidized operation as shown in the following calculation.

Effect of net operating-differential subsidy and tax benefits on net income after taxes, subsidized operators, 1947–51

	Thousands of dollars	Percent
Net income after Federal taxes	$235,728	100.0
Estimated net subsidy	131,887	55.9
Estimated tax savings	51,300	21.7

Source: Scope and Effect of Tax Benefits Provided the Maritime Industry (supplementary report), U. S. Treasury Department, Washington, D. C. Nov. 1, 1952.

(*b*) *Net worth.*—The substantial returns earned by subsidized operators in the postwar period have been used in large measure to increase their net worth. Subsidized operators as a group have increased their net worth from $335 million in 1947 to about $487 million in 1952, an increase of around 45 percent. As shown in the table, earned surplus increased over $127 million or 52 percent.

Analysis of changes in net worth, subsidized operators, Dec. 31, 1947, to Dec. 31, 1952

	Dec. 31—		Increase	
	1947 [1]	1952	Amount	Percent
Capital stock	$65,727,000	$88,762,000	$23,035,000	35.0
Capital surplus	23,492,000	24,765,000	1,273,000	5.4
Earned surplus	245,523,000	373,088,000	127,565,000	52.0
Total net worth	334,743,000	486,616,000	151,873,000	45.4

[1] Operating subsidy accruals for 1947 are not reflected in these figures.

Source: Company reports filed with the Maritime Administration.

Changes in net worth reflect many factors, such as governmental subsidy policy, managerial policy, and character of ownership. Subsidized operators are required by their contracts to retain excess profits in reserve funds. Income taxes on such deposits are deferred. Tax-deferment benefits also induce many operators to deposit additional earnings voluntarily. As a group the subsidized operators generally have followed a rather conservative dividend policy. For example, combined net profit after taxes for the years 1951 and 1952 amounted to approximately $128 million. Dividends in the same period amounted to about $42 million, of which about $30 million was paid in cash, the balance in stock. With the exception of one company in 1951 paying a portion of its dividends from surplus, all dividends were paid from current earnings.

(*c*) *Capital structure.*—Reinvestment of earnings has also produced substantial change in the capital structure of the subsidized operators between 1947 and 1952.

Comparison of capital structure, subsidized operators, Dec. 31, 1947, and Dec. 31, 1952

[Thousands of dollars]

Item	Dec. 31		Dec. 31		Increase or decrease	
	1947 [1]	Percent	1952	Percent	Amount	Percent
Total capital	$438,897	100.0	$586,319	100.0	$147,422	33.6
Mortgage notes (Maritime Administration)	104,154	23.7	90,088	15.4	[2] 14,066	[2] 13.5
Other long-term debt			9,615	1.6	9,615	
Net worth, total	334,743	76.3	486,616	83.0	151,873	45.4
Capital stock	65,727	15.0	88,762	15.1	23,035	35.0
Capital surplus	23,492	5.4	24,765	4.2	1,273	5.4
Earned surplus	245,523	55.9	373,088	63.6	127,565	52.0

[1] Operating subsidy accruals for 1947 are not reflected in these figures.
[2] Decrease.

Source: Company reports filed with the Maritime Administration.

As shown in the table, owners' equity has increased substantially relative to total capital as well as in absolute terms. Borrowed capital represents largely Maritime Administration 20-year mortgages at 3½-percent interest on ships purchased under the Merchant Ship Sales Act, 1946.

As these notes mature, this source of capital will decline in importance. Relatively little capital has been borrowed from private sources. Of the $9.6 million, $2.6 million is a loan secured by ship mortgages acquired to redeem preferred stock, and $7 million represent loans for working capital.

There were wide differences in the capital structure of the individual subsidized companies at the end of 1952 as shown in the following table:

Capital structure, subsidized operators, Dec. 31, 1952

[Percentage]

Company	Total	Long-term debt			Net worth			
		Total	Maritime Administration	Other	Total	Capital stock	Surplus	
							Capital	Earned
American Export Lines	100	34.0	27.2	6.8	66.0	0.6	0.8	64.6
American Mail Line	100	25.1	25.1		74.9	17.2		57.7
American President Lines	100	17.5	17.5		82.5	16.3		66.2
Farrell Lines	100	25.9	25.9		74.1	19.4		54.7
Grace Line	100	5.0	5.0		95.0	40.1		54.9
Lykes Bros.	100				100.0	3.1		96.9
Mississippi Shipping	100	19.8	19.8		80.2	16.6		63.6
Moore-McCormack	100				100.0	34.7		65.3
New York & Cuba	100	13.4		13.4	86.6	28.0	24.6	34.0
Oceanic Steamship Co	100				100.0	15.9	15.9	68.2
Pacific-Argentine-Brazil	100				100.0	80.4	.7	18.9
Seas Shipping	100				100.0	6.6		93.4
United States Lines	100	46.9	44.8	2.1	53.1	3.0	19.0	31.1

Source: Company reports filed with the Maritime Administration.

Five of the companies had no long-term debt, the remaining having debt ranging from 5.0 to 46.9 percent of total capital. Only three companies, and these to a minor extent, borrowed capital from private

sources. Equity capital represented each of the companies' largest proportion of capital, ranging upward from 53.1 to 100 percent. The outstanding point of similarity in the capital structures is the relatively large percentage of earned surplus. Earned surplus for 10 companies represented more than 50 percent of total capital. For 2 companies, earned surplus amounted to over 90 percent of capital. In contrast, capital stock amounted to less than 20 percent of total capital in the case of 10 companies. Shipping companies have not relied upon sales of capital stock to obtain outside capital in recent years. Subsidized companies in general are closely held or family corporations whose owners apparently are reluctant to yield or dissipate control and equity by distributing shares publicly.

(*d*) *Fund availability for ship replacement.*—The net ship replacement cost to the subsidized operators as of December 31, 1952, was $1,632,409,000, according to an estimate [14] prepared by the Maritime Administration in connection with its administration of operators' voluntary deposits to reserve funds.

Subsidized shipping companies are required by present law to provide out of their own funds at least 25 percent of the acquisition cost as a downpayment. Total estimated funds required on this basis would amount to approximately $408 million. The voluntary deposit study estimates [15] that as a group the subsidized operators will lack approximately $44 million of meeting the downpayments on new ships as they are acquired in replacement. On an individual line basis, the deficiency, amounting to $88 million as shown below, is much more serious. It is estimated that only 5 of the 15 operators will have sufficient funds.

Lines with deficiency	*Amount*
American Mail Line, Ltd	$4, 837, 471
American President Lines, Ltd	9, 353, 853
Farrell Lines, Inc	12, 787, 653
Mississippi Shipping Co., Inc	7, 985, 707
Moore-McCormack Lines, Inc	1, 480, 222
The Oceanic Steamship Co	1, 951, 630
Pacific-Argentine-Brazil Line	34, 385
Pacific-Far East Line, Inc	7, 680, 463
Pacific Transport Lines, Inc	4, 985, 448
United States Lines Co	37, 062, 262
Total	88, 159, 093

In view of the rather favorable earnings, 1947–52, as shown earlier, and the improvement in capital structure through reinvestment of

[14] It provides for the replacement of all cargo and combination and passenger ships owned by the subsidized operators, except the steamship *United States*, steamship *Constitution*, and steamship *Independence*, and 5 unsubsidized cargo ships believed to be in excess of long-range requirements, taking into consideration the obligations contained in the operating-differential subsidy contracts. Costs were based primarily on an extensive cost study incorporated in American Merchant Marine and the Federal Tax Policy, prepared by the Maritime Administration, October 30, 1952. Costs reflect September 1952 prices plus 10 percent to cover contract changes, and material and labor escalation during the building period. Defense features and subsidy benefits, estimated at 37½ percent, are excluded. While based on the same cost study, these costs differ from those appearing in the section on Ship Requirements principally because an average deadweight ton was employed here rather than an average ship basis as was used in the earlier section. The earlier section also reflects prices as of December 1953, which were 6 percent higher.

[15] Maritime Administration study as of December 31, 1952, of estimated funds that would be available for ship replacement, included: (1) operators' capital reserve fund balance as of December 31, 1952, and free earnings authorized for deposits therein and other required deposits; (2) the sum of the special reserve fund balance after deducting 5 percent of "capital necessarily employed" and estimated recapture liability applicable to initial recapture period, mandatory deposits of profits not made as of December 31, 1952, and excess working capital; (3) projected interest to be earned on reserve funds; (4) depreciation on ships to be funded after December 31, 1952; (5) residual value of ships estimated at 2½ percent of estimated reproduction cost. From the sum of these amounts, outstanding mortgage indebtedness as well as certain allowances for average voyage expenses is deducted in arriving at the total estimated funds available.

earnings, the magnitude of this estimated deficiency [16] may seem surprising and requires explanation.

One of the principal sources of replacement capital for subsidized operators is the funding of depreciation allowance. Unlike the practices in most industries, where these allowances are retained in general funds, subsidized operators are required to make deposits in their capital reserve funds equal to depreciation if earned on all ships operating under subsidy. These deposits, however, will prove woefully inadequate to provide replacement funds for several reasons. Depreciation allowances are based on the cost of acquisition to the owner. The bulk of the subsidized fleet was purchased under the provisions of the Merchant Ship Sales Act, 1946, at prices greatly below actual cost of construction or what the ships would have cost to reproduce at the time of acquisition. Since then shipbuilding costs have risen sharply.[17] Moreover, replacement ships usually will cost more than the ships being replaced because of technical advances such as speed, navigational aids, cargo-handling gear, betterments in accommodations, all of which are expensive but not necessarily productive of proportionately greater earning power. Hence, when the ships are due for replacement, there will be a wide disparity between the ships' acquisition cost used as a basis for funding of depreciation and the cost of replacement. It appears that to bridge this gap, the subsidized operators, even to meet downpayment requirements, will have to earn and retain substantial earnings or attract new equity capital. Depreciation is not now being set aside on the true cost of the active fleet.

The balance of capital required for replacement that is not supplied by the owners will have to be borrowed, either from the Government or private sources. Experience indicates that most reliance probably will have to be placed on Government loan programs in view of the past hesitancy of private capital. Recently, legislation was enacted to stimulate the flow of private capital to the industry by authorizing Government guaranty of ship mortgages up to 90 percent of the notes. However, at least one banker has expressed the opinion that the guaranty will not prove an incentive for private financing.[18]

2. Nonsubsidized operators

Financial data are not available in sufficient quantity and detail to disclose accurately the financial condition of shipping companies not receiving operating subsidy. Also, separation of the financial results for strictly shipping operations is not always possible because nonsubsidized operators may be engaged in other business enterprises. Based on limited information for selected nonsubsidized operators, it appears generally that they did not fare as well financially as the subsidized companies in the postwar period.

(*a*) *Earnings.*—As shown in the following table, the average returns on net worth before and after taxes for the period 1946–51, for nonsubsidized companies operating liner services were 10.7 percent

[16] The deficiency estimate depends both on the estimate of replacement cost and fund availability. Both have been subjected to criticism—the former for being based on more expensive ships than required commercially, and the latter for including a contingency for future losses but not profits and using minimum scrap basis for residual value.

[17] The Index of Estimated Costs of Shipbuilding, prepared by the Maritime Administration, rose from about 145 in 1946 to about 215 in 1952, an increase of nearly 50 percent.

[18] See Merchant Marine Studies, hearings before the Senate Committee on Interstate and Foreign Commerce, 83d Cong., 1st sess., pursuant to S. Res. 41, pt. 2, San Francisco, October 21, 22, and 23, 1953, pp. 1008–1009

and 5.7 percent, respectively. The rate of earnings was slightly higher in 1951–1952, although this may be accounted for by the difference in companies reported.

Rate of return on net worth before and after Federal income taxes, selected nonsubsidized liner shipping companies, 1946–52

Year	Number of companies	Rate of return		Year	Number of companies	Rate of return	
		Before taxes	After taxes			Before taxes	After taxes
1946 [1]	12	9.2	5.6	1951 [1]	16	18.3	9.0
1947 [1]	14	13.0	7.0	Average 1946–51 [1]		10.7	5.7
1948 [1]	14	3.3	.6	1951 [2]	12	25.9	12.3
1949 [1]	16	8.6	5.8	1952 [2]	12	14.7	7.9
1950 [1]	16	10.8	6.1				

[1] Scope and Effect of Tax Benefits Provided the Maritime Industry (Supplementary Report), U. S. Treasury Department, Nov. 1, 1952.
[2] Company reports filed with the Maritime Administration.

The difference in rate of return between subsidized and nonsubsidized companies before taxes probably results from the operating subsidy paid the former. After taxes the difference is magnified by the effect of tax deferment on earnings deposited by the subsidized lines in reserve funds. During the period 1946–51 the average percentage of Federal income taxes to net income for nonsubsidized lines amounted to 46.1 which compares with 25.4 for the subsidized lines, 1947–51. Approximately the same disparity existed in 1951 and 1952.

Earnings of selected tramp shipping companies were quite good in 1951 and compared favorably with those earned by liner service companies, as shown in the following table. Returns for 1952, however, were extremely poor, demonstrating the general lack of stability in earnings experienced in the tramp shipping industry. In 1951, Federal income tax absorbed 36.3 percent of their net income.

Rate of return on net worth before and after Federal income taxes, 13 selected tramp shipping companies, 1951–52

Year	Companies with net loss	Rate of return	
		Before taxes	After taxes
1951	0	26.7	17.0
1952	6	4.8	.5

Source: Company reports filed with the Maritime Administration.

(*b*) *Net worth.*—The following table analyzes the changes in net worth between the initial postwar report date and December 31, 1952, for selected nonsubsidized liner and tramp shipping companies.

Analysis of changes in net worth, selected United States nonsubsidized shipping companies

[Thousands of dollars]

LINER SERVICE COMPANIES (12)

	First year reported [1]	Dec. 31, 1952	Increase	
			Amount	Percent
Capital stock	27,701	30,964	3,263	11.8
Capital surplus	16,268	28,992	12,724	78.2
Earned surplus	40,016	71,787	31,771	79.4
Total net worth	83,985	131,743	47,758	56.9

TRAMP SHIPPING COMPANIES (13)

Capital stock	5,287	6,447	1,160	21.9
Capital surplus	111	187	76	68.5
Earned surplus	2,891	5,908	3,017	104.4
Total net worth	8,289	12,542	4,253	51.3

[1] Liner: Dec. 31, 1946, 6; 1947, 3; 1949, 1; 1951, 1; May 31, 1949, 1. Tramp: Dec. 31, 1946, 1; 1948, 1; 1949, 4; 1950, 2; 1951, 4; May 31, 1948, 1.

Source: Company reports filed with the Maritime Administration.

The nonsubsidized liner companies as a group increased their net worth substantially over the reported period from about $84 million to $132 million, or 56.9 percent. Nearly 25 percent of this increase was the result of increases in capital surplus. Earned surplus increased from $40 million to $72 million, or about 80 percent.

Net worth of the 13 tramp shipping companies as a group likewise increased greatly during the period from $8.3 million to $12.5 million, or about 51 percent. Earned surplus for the group more than doubled. Of the 13 companies, 8 registered increases of over 100 percent, while 3 show decreases. Between 1951 and 1952, however, earned surplus was increased by about $1.1 million as the result of a merger and about $630,000 as a result of a net recovery from insurance on the grounding of a vessel. Thus, 2 companies in 1 year as a result of other than strictly shipping operations accounted for over one-half of the increase of the period involved.

(*c*) *Capital structure.*—The following table analyzes the changes in capital structure of selected nonsubsidized shipping companies from the initial postwar report date to December 31, 1952.

Analysis of changes in capital structure, selected United States nonsubsidized shipping companies

[Thousands of dollars]

LINER SHIPPING COMPANIES (12)

	First year [1]		Dec. 31, 1952		Increase	
	Amount	Percent	Amount	Percent	Amount	Percent
Mortgage notes (Maritime Administration)	29,265	25.8	34,925	20.6	5,660	19.3
Other long-term debt			2,684	1.6	2,684	
Equity	83,985	74.2	131,743	77.8	47,758	56.9
Total	113,250	100.0	169,352	100.0	56,102	49.5

TRAMP SHIPPING COMPANIES (13)

Mortgage notes (Maritime Administration)	6,152	40.9	7,465	34.6	1,313	21.3
Other long-term debt	593	3.9	1,593	7.4	1,000	168.6
Equity	8,289	55.2	12,542	58.0	4,253	51.3
Total	15,034	100.0	21,600	100.0	6,565	43.7

[1] Liner: Dec. 31, 1946, 6; 1947, 3; 1949, 1; 1951, 1; May 31, 1949, 1. Tramp: Dec. 31, 1946, 1; 1948, 1; 1949, 4; 1950, 2; 1951, 4; May 31, 1948, 1.

Source: Company reports filed with the Maritime Administration.

While mortgage notes held by the Maritime Administration increased in amount by about 20 percent for both liner and tramp companies, this source of capital declined in relative importance for both groups. For both groups it represented a greater portion of total capital than for subsidized operators, 20.6 percent in 1952 for nonsubsidized liner companies, 34.6 percent for tramp companies, and 15.4 percent for subsidized companies. Conversely, equity capital while fairly substantial in proportion to total capital was not as great relatively for nonsubsidized operators. As is true for the subsidized operators, relatively little capital has been borrowed from private sources.

Whether the shipping industry will go forward with the investment of available funds in new construction, in fact, whether operators will continue to operate at present levels under the American flag in the face of existing conditions is a matter of some conjecture. It is necessary, therefore, to examine some of the other problems which today are facing the American merchant marine.

B. COST DISADVANTAGES OF UNITED STATES

The United States-flag merchant fleet operated in the foreign trade is required to compete with foreign-flag merchant vessels which have been built and are being operated at substantially lower costs. However, the differences between United States and foreign costs are not uniform nor capable of precise determination as is generally assumed. They vary with each foreign-flag merchant fleet, each operator, each shipyard, each type of ship, the time an estimate is made, economic conditions prevailing in each country, and a host of other factors including the amount and quality of the information which can be obtained. There is no such thing as a single cost for United States-flag operations nor for foreign-flag operations and all differences in costs

must be viewed as estimates and therefore subject to errors inherent in cost estimating.

1. Construction costs

The former United States Maritime Commission agreed to pay subsidies in connection with the construction of 6 new ships and the reconditioning and reconstruction of 22 ships as follows:

Company	Reconditioning and reconstruction	New ships
American Export Lines, Inc	4	2
American President Lines, Ltd	3	[1] 3
Mississippi Shipping Co., Inc	10	
Moore-McCormack Lines, Inc	3	
New York & Cuba Mail Steamship Co	2	
United States Lines Co		1
Total	22	6

[1] Taken over by Government for Department of Defense.

In view of the criticism by the Comptroller General with respect to subsidy allowances on the above vessels, the Federal Maritime Board was under a mandate to review the determinations in all of the above cases. As to the reconditioning and reconstruction cases, the New York & Cuba Mail Steamship Co. agreed to the cancellation of the subsidy allowance by the former Commission with respect to its two vessels. The Maritime Administration staff recomputed the subsidy allowances with respect to the 20 vessels. The Board has taken action on the recalculations applicable to American President Lines, Inc., Mississippi Shipping Co., Inc., and Moore-McCormack Lines, Inc., and these operators have been given a specified number of days to accept the Board's redeterminations or reject them.

As to the two new vessels constructed for the account of American Export Lines, Inc. (SS. *Constitution* and SS. *Independence*), the construction-differential and national defense allowances have been redetermined by the Board, but the Comptroller General has taken exception thereto. The construction-differential and national defense allowances in connection with steamship *United States* were not redetermined by the Board. However, the Department of Justice took steps on March 15, 1954, to recover the alleged excess allowances approved by the former Maritime Commission.

The most recent expression by the Federal Maritime Board of the difference between foreign and United States shipbuilding costs may be found in its decision with respect to the "mariner" class vessels. In percentage terms, the construction-differential found in that case varies from 39.39 to 44.83 percent.

From the operator's point of view, the problem is not so much the cost differential which exists, because all vessels to be built for operation in the foreign trade are eligible for construction subsidy provided they meet certain standards, but rather the uncertainty which presently exists in the amount of subsidy the operator will ultimately pay for the ship. The problems encountered in administering the construction-differential subsidy program and the uncertainties of Government ship construction aid, are treated in detail in a later section.

2. Operating costs

It has long been recognized that operating costs of United States-flag vessels are substantially higher than those of foreign-flag operators. In order to place United States-flag operators on an operating parity cost basis, Congress has enacted legislation which authorized the Federal Maritime Board to pay subsidies to offset differences in costs which are substantial. Five items are subsidized—wages; subsistence; maintenance and repairs; stores, supplies, and equipment; and insurance. Subsidy payments for wages in 1951 accounted for about 82 percent of the total subsidy. The other subsidized items accounted for relative payments of about 8 percent for insurance,[19] 3.5 percent for maintenance and repairs, 3.5 percent for subsistence, and 3 percent for stores, supplies, and equipment.

(*a*) *Labor costs.*—Wages paid to seamen employed on United States-flag vessels have been increased very substantially during the past 15 years. On a relative basis this increase is greater for the lower ratings as indicated by the following table, which provides data only for base wages for representative ratings:

Increase in United States base wages, 1937–52

	1937	1952	Percent increase
Master	$345	$957	177
Chief engineer	310	870	181
3d mate	160	482	201
3d assistant engineer	160	482	202
Radio officer	125	473	279
Chief steward	120	368	207
Boatswain	85	378	345
Able-bodied seaman	73	302	317
Wiper	60	289	381

These wage data indicate that base wages have been increased very substantially. However, since they are limited to base wages only, a complete story is not portrayed because ship operators are now required to bear certain wage costs which they did not have to pay in 1937. These items amount to considerable sums. Overtime pay is now applied to all regular work performed outside of the normal workweek and, in addition, certain penalty payments must be made for special types of work both within and outside the normal workweek. To be more specific, the normal workweek in 1937 constituted 56 hours at sea and 44 hours in port. In 1946, the workweek was reduced to 48 hours at sea and 40 hours in port, and in 1951 to 40 hours for both sea time and port time. The decrease in the workweek has increased overtime payments to such a degree that in 1947 this account amounted to 29.9 percent of base wages when the workweek was on a 48–40 basis and to 39.8 percent in 1952 when the 40–40 basis was adopted.

Vacation payments have also increased wage costs. In 1937, this item was of little significance since paid vacations were granted by so few operators. In 1947, however, it amounted to 1.6 percent of base wages and in 1952 it comprised 5.2 percent. Federal and State social benefits have been also increased somewhat over those in effect in 1937 and now amount to from 3.5 to 4 percent of the total wage bill. World

[19] Estimated.

War II war-risk bonus payments were continued in part until late 1953. Moreover, the introduction in 1950 of the first welfare and pension program has increased wage costs so that in 1952 this item amounted to 4.3 percent of total base wages. Finally, manning requirements have been increased on United States-flag vessels to a greater degree than on foreign-flag vessels partly because of collective-bargaining agreements. The following table is presented to indicate for a typical C–2 type dry-cargo freighter the increase in wage costs between 1937 and 1952 and the increased significance of overtime and so-called fringe-item costs which include such costs as vacation, area bonuses, social benefit, and welfare and pension costs.

Trend in monthly wage costs for a typical United States-flag C–2 type vessel

	1937		1952		Percent increase
	Dollars	Percent	Dollars	Percent	
Base wages	$4,543	91.0	$15,736	65.2	246
Overtime	432	8.6	6,264	25.9	1,350
Fringe items	20	.4	2,152	8.9	10,660
Total	4,995	100.0	24,152	100.0	384

One of the prime factors to be considered in comparing United States wage costs aboard ship with foreign-flag labor costs concerns the countries which are actually competitive with United States ships on subsidized and nonsubsidized services. Since the end of World War II, the actual number of competitive foreign flags encountered by the American operators has increased to the point where in 1951 there were approximately 27 substantially competitive foreign flags, as follows:

India	Panama	Brazil
United Kingdom	Denmark	Finland
Greece	Netherlands	Japan
Israel	Sweden	Spain
Norway	Union of South Africa	Germany
Italy	Belgium	Honduras
Yugoslavia	Chile	Venezuela
France	Ecuador	Cuba
Egypt	Argentina	Liberia

In the year 1951 alone, five foreign-flag fleets—Germany, Japan, Liberia, Finland, and Yugoslavia—assumed a competitive importance in world shipping. The percentage of competition offered by each foreign-flag fleet will vary depending upon such factors as changes in traffic carried by each foreign-flag competitor. Many countries which had small merchant fleets or no fleet at all before World War II have emerged as substantial competitors on particular trade routes. Among these are India, Israel, Yugoslavia, Egypt, Union of South Africa, Chile, Ecuador, Argentina, Brazil, Venezuela, and Liberia. Even landlocked Switzerland now has a merchant fleet of more than 30 ships.

Among foreign fleets, the Japanese and German fleets are rapidly regaining their prewar positions in worldwide trading. Israel and Yugoslavia have developed as substantial competitors in the Mediterranean trade routes, and Argentina, Brazil, Chile, and Venezuela are important in the South American trades. Ships of Norwegian

and British fleets operate on many world trade routes and provide United States-flag operators with a great deal of competition. Panama and Liberia are becoming increasingly more important as competitors of American-flag shipping, but the cost of labor aboard these ships cannot be gaged with any degree of accuracy since wages are negotiated between the employer and employee on terms most favorable to the employer and without benefit of protection of collective bargaining or of governmental authority.

While the operating costs of a very few foreign-flag operators approximate the operating costs of United States-flag operators, the bulk of the vessels registered under foreign laws operate at favorable costs in contrast to the ships under United States registry. Norwegian wage costs are not only low, but manning requirements also are low.

Vessels of United Kingdom registry also are among the low-cost competitors. These ships may be manned by European crews or by a "mixed" crew which consists of European officers and Asiatic or Lascar seamen. These non-European seamen are paid lower wages than those paid to European seamen—an important consideration when it is realized that from 35 to 40 percent of British seamen are Asiatics. However, the lower wages which they are paid are offset to a considerable extent by the large number of Lascar seamen who generally are employed on each ship. Consequently, the difference in total wages paid British crews of European stock and crews of Asiatic stock is not too great. In 1951, for example, a ship which under United States practice would have been manned by 51 men at a monthly wage cost of $20,800 would have been manned under British practice by a European crew of 47 men who would have been paid about $4,700 or by an Asiatic crew of 73 men at a wage cost of $4,400.

Japanese wage costs, despite their relatively high manning requirements, are the lowest encountered by United States-flag vessels. In 1951 ships of United States-flag registry operating in competition with Japanese ships paid wages which averaged $21,700 per month in contrast to Japanese payments of $2,900 per month. The following table provides a few typical examples of the wage differences between United States-flag vessels and foreign-flag vessels in competition on certain trade routes:

Representative monthly wage costs by flag of operator on typical trade routes

Flag of registry	Nominal trade route designation				
	A	B	C	D	E
United States	$23,000	$25,000	$20,000	$20,000	$18,000
Danish	6,400				
Chilean	9,400				
Norwegian		5,500	5,200		5,300
Belgian			8,300		
United Kingdom			4,700		5,000
Greek				6,300	
Italian				6,500	
Spanish				5,300	
Netherlands					7,600
Union of South Africa					6,000

Wages paid to United States seamen are not determined in the same manner as wages paid to foreign-flag seamen. In the United States, for example, the bulk of the labor cost is actually the base wage and overtime paid to the seamen. In many foreign countries, however, the base wage is actually less significant compared to the overall labor cost which includes payments made directly to the wage earner and also benefits to the employee and his family through various established funds and welfare programs to which the employer, in some instances, and the employer and employee in others, contribute. In the United States, social wage items, as such, amount to approximately 4 percent of the total wages paid to a seaman. In Italy, on the other hand, the actual wages which a seaman receives do not even approximate 50 percent of the total labor cost to the steamship operator. The operator must pay certain specified amounts to the state or to special funds designated by the state for certain welfare and social security benefits available to the worker. Among these benefits may be listed: disability, old-age pensions, tuberculosis, unemployment insurance, marriage and birth grants, family allowance supplementary social insurance, social solidarity fund, industrial accident and sickness insurance and nonoccupational sickness insurance, housing allowance, support of orphans, and protection of working mothers. In other countries where wages are low, provisions are made for the workers to participate in the profits of the company. This situation prevails in Spain, Chile, Japan, and other countries.

The averages of composite weighted differentials between United States and foreign costs, estimated on the several subsidized United States trade routes between the years 1947 and 1951, inclusive, are as follows:

	Percent (approximate)		*Percent (approximate)*
1947	57	1950	68
1948	54	1951	71
1949	62		

It will be noted that from 1948 there has been a steady increase in the rate of differential between United States and foreign seagoing labor costs. Some of the principal factors responsible for the increases in these differentials are: (1) accelerated increases in United States manning and wage costs, only partially offset by increases in foreign-flag wage costs; (2) changes in foreign competition and the introduction in many instances of low-cost foreign flags offering substantial competition; (3) trends in certain foreign countries toward a policy of laissez faire insofar as wages and take-home pay are concerned, and payments by the government of increased social and fringe benefits to seamen and their families; and (4) devaluation of foreign currencies.

(*b*) *Subsistence costs.*—Estimates of the differences between food costs of subsidized United States-flag and foreign-flag competitors have been calculated by the Maritime Administration for each year from 1947 through 1951. The following table presents typical examples of the trend of subsistence-differential subsidy rates on several trade routes for the years 1948 through 1951.

Subsistence subsidy rates

[Percent]

Year	Nominal trade route designation				
	A	B	C	D	E
1948	14.70	None	7.90	24.20	1.14
1949	38.90	[1] 5.20	32.90	13.90	8.81
1950	30.50	[1] 8.40	44.70	25.10	3.04
1951	37.10	[1] 1.20	40.90	26.70	28.26

[1] Indicate a negative differential.

Food costs of United States-flag operators have tended to increase during the period 1947 through 1951, principally because prices of foods increased. Food costs of foreign-flag operators used in establishing the subsidy rates were influenced by (1) increases in prices in the related countries of storing; (2) devaluation of foreign currencies in September 1949; and (3) changes in foreign competition with variations in the principal lines under each flag, as well as the differences in subsistence costs between foreign competing lines.

The differential between United States-flag and foreign-flag food costs in 1948 was low primarily because food supplies were scarce in European and Asiatic countries and foreign-flag vessels purchased much of their food supplies in the United States. As foods became more plentiful in foreign countries and as the dollar shortage became more intense, foreign-flag operators purchased their supplies either in the cheapest market or in the home country.

(*c*) *Stores, supplies, and expendable equipment.*—The following table illustrates the trend in the rates for this subsidized item of expense as applied to dry-cargo freighters.

Subsidy rates—Stores, supplies, and expendable equipment

[Percent]

Year	Nominal trade route designation				
	A	B	C	D	E
1948	None	None	3.10	None	4.70
1949	1.70	None	5.40	0.60	1.50
1950	6.10	6.40	20.50	10.90	7.70
1951	4.50	2.30	12.40	1.70	[1] 3.80

[1] Indicates a negative differential.

It can be seen from the above that the rates are not especially high when compared with other categories of subsidizable expense. Increased availability of supplies throughout the world, devaluation of foreign currencies, changes in competition and storing practices, all would tend to influence the rates for each year.

(*d*) *Insurance.*—Subsidizable items of insurance include two categories; namely, (1) hull and machinery insurance, and (2) protection and indemnity insurance. Because of the differences in each type, separate subsidy rates are computed. Subsidy rates for hull and machinery insurance are influenced considerably by the repair costs in foreign areas, for the cost of insurable repairs is a substantial factor

in setting the amount of premium to be paid. Moreover, the American subsidized operator is required to have his insurable repairs performed in the United States, except in those cases where either the classification society or the insurance underwriter requires that the work be performed in foreign ports. However, the foreign competitor, whenever possible, will accomplish such work in the cheaper foreign repair areas.

The following table illustrates the trend in the hull and machinery insurance subsidy rates.

Subsidy rates—Hull and machinery insurance

[Percent]

Year	Nominal trade route designation				
	A	B	C	D	E
1948	4.99	25.33	14.85	13.28	16.84
1949	5.20	25.41	12.33	21.48	17.25
1950	12.84	45.83	31.15	23.39	25.54
1951	12.28	42.33	33.44	20.81	14.42

The areas where foreign competitors have their insurable repairs made each year as well as the costs in those repair areas will cause the rates to vary between years. Devaluation of foreign currencies, changes in foreign-flag competition, and changes in costs, all tend to influence the overall costs used in establishing the subsidy rates.

The Federal Maritime Board has not set any subsidy rates for protection and indemnity insurance and therefore no trends are presented herein. It is anticipated, however, that the majority of these rates for this category will be finalized by June 30, 1954.

(*e*) *Maintenance and repairs.*—The rates approved by the Board vary widely from one trade route to another as is indicated by the following table:

Subsidy rates—Maintenance and repair

[Percent]

Year	Nominal trade route designation				
	A	B	C	D	E
1948	10.17	0.36	25.95	7.29	8.57
1949	19.20	1.62	29.56	7.59	14.94
1950	31.85	10.87	61.19	38.57	28.60
1951	30.91	9.34	58.33	39.96	18.76

The repair practices of foreign competitors have considerable influence in the resultant rate determinations. The trend of foreign operators to have their repairs performed in the cheapest repair areas, whereas American subsidized operators are obliged to accomplish their repairs in the United States, will tend to increase the subsidy rates. The opening of new repair areas (such as Japan and Germany) which obviously are cheaper, have drawn foreign-flag competitors away from the United States repair centers in certain trades.

Repair costs used in establishing these rates are based on priced-out specifications furnished the Maritime Administration through the

facilities of the United States Salvage Association, Inc., New York City, who have representatives or agents in all principal ports of the world. The trend in costs reported support the statements showing substantially lower repair costs in foreign areas. The table below shows the cost levels for certain repair areas in relation to the United States Atlantic coast.

[Percent]

Repair area	1948	1949	1950	1951
United States Atlantic coast	100.0	100.0	100.0	100.0
Netherlands	96.4	89.5	55.8	55.5
Italy	83.5	82.5	63.2	64.2
United Kingdom	74.0	70.4	38.8	38.6
Japan			68.6	62.6
Germany			53.6	56.3

From the above table it can be seen that an American operator's repairs would cost approximately 45 percent less in Netherlands, 38 percent less in Japan, and 44 percent less in Germany in the year 1951. It should also be noted that devaluation of foreign currencies in 1949 had considerable effect upon the levels of cost. Thus, devaluation of foreign currencies, changes in foreign-flag competition, changes in the cost levels for the repair areas of the world, all influence the overall costs which are used in establishing the subsidy rate. In addition, payments on this account will increase as the average age of the subsidized vessels becomes higher, because older ships require more and costlier repairs than newer vessels.

C. FLUCTUATIONS IN OVERSEAS TRAFFIC

The foreign-trade water-transportation industry, like all other transportation media, performs a service function and is dependent upon other types of industries for its livelihood. The basic conditions which create fluctuations in the volume of available waterborne traffic are beyond the control of the industry. Its opportunities to develop traffic are sharply limited; as a rule it merely carries the traffic which is to be moved. The financial results of ship operators depend in large part, therefore, upon their ability to adjust their services to extreme fluctuations in traffic and, where possible, to deploy their fleets in areas of profitable employment.

Some idea of the degree to which United States-flag vessels engaged in performing services in the foreign trade are affected by traffic fluctuations may be gained from an examination of the United States foreign-trade statistics. These statistics in general show that the United States foreign trade is marked by wide fluctuations which are the result of political developments, legislative restrictions, socio-economic changes, and meteorological developments. Any of these elements, or a combination of them, may produce profound effects upon international trade.

1. Volume of traffic

An analysis of the fluctuations that have occurred in the United States foreign trade shows on an overall basis that they do not affect the various major types of ocean carrier services (tanker, liner, and nonliner) to the same degree nor in the same manner.

(*a*) *Tanker traffic.*—The movement of petroleum and petroleum products, considering both exports and imports together, has shown a marked increase which, with a few minor annual exceptions, has been steady. Actually, tanker carryings from United States ports have declined sharply—from about 18.6 million tons in 1937 to about 10.9 million tons in 1952. However, inbound tanker carryings have more than offset this decrease since they have been increased from about 10.4 million tons to about 51.5 million tons during the same period. It is obvious, therefore, that an opportunity existed for increased tanker employment.

If such data were the only criteria for determining the success or failure of ship operations, one could be optimistic about the position of United States-flag tanker vessels in the foreign trade, especially since between 1937 and 1952 they had obtained a substantial share of the increased petroleum traffic. While tankers during most of the post-World War II period were in short supply, United States-flag tankers have benefited somewhat from the 50-percent cargo preference policy. In view of the tight supply-and-demand position for tankers, rates for the carriage of petroleum and petroleum products were at a very high level and United States-flag tankers were able to operate freely in the foreign trade in competition with low-cost foreign-flag tankers. This situation is now changed. Tankers are now in a surplus position not because traffic has decreased but because many new tankers were built within the past few years. As a result, tanker rates have fallen to very low levels and the high-cost United States-flag tankers are meeting with strong foreign-flag competition—a condition which is expected to continue for some time to come.

(*b*) *Nonliner traffic.*—Nonliner operators in contrast with liner operators also have experienced extremely wide fluctuations in the volume of outbound traffic which has been available to them during the post-World War II period, as can be seen in the following table:

Volume of United States oceanborne dry-cargo export trade

[In millions of long tons]

Year	Total	Liner	Nonliner
1948	47.9	21.8	26.1
1950	28.9	18.1	10.8
1951	71.1	22.5	48.6
1952	60.6	21.0	39.6

The large amount of nonliner outbound cargo moved during 1948, 1951, and 1952 was due to unusual emergency conditions and much of this freight was transported by United States Government-owned ships which are now in the reserve fleet. Most of this emergency traffic has now disappeared, with the result that the traffic for 1953 was much smaller in volume. Two commodities—coal and grain—accounted for virtually all the abnormal post-World War II outbound cargo movement from ports of the United States.

Nonliner imports have not been subject to the same wide fluctuations as nonliner exports, as is shown in the following table:

Volume of United States oceanborne dry-cargo import foreign trade

[In millions of long tons]

Year	Total	Liner	Nonliner
1948	30.4	20.2	10.2
1950	37.4	24.1	13.3
1951	39.2	24.0	15.2
1952	39.2	22.8	16.4

Nonliner inbound traffic has increased rather sharply from 10.2 million tons in 1948 to 16.4 million tons in 1952. In view of the growing dependence of the United States for certain raw materials, especially iron ore, this trend is expected to continue provided the steel companies do not build industrial-type carriers to transport most of their raw material requirements.

(*c*) *Liner traffic.*—In marked contrast to the volume of nonliner traffic, liner vessels carried a fairly steady amount of traffic. However, this relative stability may indicate a difficult future position for liner-type vessels since they transported during 1948, 1951, and 1952, a substantial quantity of the two commodities which moved in abnormally large volume. If that traffic is deducted from the total outbound carryings by liner vessels, it would appear that somewhat smaller quantities of regular liner traffic were available outbound during a period of lush traffic. Liner inbound traffic has shown a modest increase and a rather stable volume of traffic.

So far the discussion has dealt with overall traffic figures which are of much more significance to operators whose vessels are operated in accordance with the flow of traffic. Liner operators are not in this category, however, because their ships are operated on one or at the most a few routes. Such a condition is also characteristic of most United States-flag nonliner operators whose vessels are engaged largely in the movement of United States foreign aid cargo, both military and economic. In such cases the volume of traffic available on the routes over which those liner and nonliner vessels are operated is of decided importance to the operators in question and wide fluctuations in traffic on those routes has a marked influence on ship operating profits. Such fluctuations are not uncommon. For example, liner exports on trade route No. 1 (United States Atlantic ports to east coast of South America) fluctuated from 1,639,000 long tons in 1948 to 840,000 tons in 1950 and 1,264,000 tons in 1951, and 1,003,000 tons in 1952. On trade route No. 4 (United States Atlantic ports to Caribbean ports) liner exports were substantially stable but liner imports declined steadily from 2,113,000 long tons in 1948 to 759,000 tons in 1952. On trade route No. 10 (United States North Atlantic ports to Mediterranean area) liner imports were relatively stable, but liner exports declined from 1,433,000 long tons in 1948 to 1,158,000 tons in 1950, but increased to 1,614,000 tons in 1951 and then declined to 1,402,000 tons in 1952. It is obvious, therefore, that relative stability of liner traffic on an overall basis is not indicative of the stability of traffic on individual trade routes.

2. Foreign-flag competition

Foreign-flag competition has been and continues to be the most important element affecting the ability of United States-flag vessels to obtain their share of traffic. For example, in the prewar years of 1937 and 1938, United States-flag vessels carried slightly over one-fourth of the total export-import dry-cargo traffic. In those years foreign-flag vessels carried practically all nonliner traffic and well over one-half of the liner traffic (57 percent in 1937 and 63 percent in 1938). United States-flag vessels have fared somewhat better in the postwar period. Immediately after the war United States liner carryings by a substantial margin exceeded 50 percent of the total liner traffic on essential trade routes. This participation has been declining somewhat in the more recent years, reaching a low of 44 percent in 1949. However, the situation improved during 1950, 1951, and 1952, when the percentage participation in those years reached 47, 50, and 48 percent, respectively. Participation of United States-flag vessels in nonliner carryings is largely a postwar development and has shown wide fluctuations in percentage of traffic carried. For example, their carryings have ranged from a high of 38 percent in 1948 to a low of 10 percent in 1950, but increased again in 1951 and 1952 to 33 and 21 percent, respectively.

A substantial portion of the nonliner traffic increase was accounted for by United States-flag vessels which were withdrawn on a temporary basis from the Maritime Administration reserve fleet to supplement the capacity of the privately owned fleet.

The availability of cargo tonnage to United States-flag vessels has been increased as a result of the 50 percent requirement in the several foreign assistance programs. However, it is unlikely, barring unforeseen developments, that these programs will continue in as prominent a role in foreign trade as they have in the past 7 years. Moreover, as has been previously pointed out, the principal foreign maritime nations are offering increasing competition to United States-flag vessels for the available traffic. This subject is given detailed treatment in a following section.

3. Air competition

Overseas air transportation, which has developed rapidly in the postwar period, offers important competition to the shipping industry in transportation of passengers and mail and, to a much lesser extent, in freight. It is, however, difficult to measure the exact extent of this competition as it seems evident that the air services, to an undetermined extent, have developed a type of traffic of their own both with respect to passengers and cargo.

The growth of overseas air passenger transportation is illustrated by the fact that 810,000 passengers arrived by air during 1952 in contrast to the 25,000 such arrivals in 1938. Passengers entering the United States by sea during the postwar period have remained at about the 1938 level of 577,000, reaching a peak of 623,000 in 1952. However, as shown in appendix table 9, United States-flag ships showed a considerable gain in their passenger carryings since World War II as compared with 1937 and 1939 performances. Furthermore, passenger vessels have been in short supply postwar, thereby preventing more people from traveling by water, particularly in the early postwar years. The fact remains, however, that overseas

passenger air transportation has developed to such an extent that in 1952 there were more arrivals in the United States by this mode of transportation than there were by sea, and it seems reasonable to conclude that such competition has had a deterrent effect on the investment of new capital in passenger-carrying ships.

While air cargo accounts for an insignificant percentage of total United States export and import traffic, airlines offer certain competition to the shipping industry on certain types of cargo, particularly in high-valued luxury goods, precious stones and metals, and some other commodities such as highly perishable goods which move only by air. They also compete for vital machinery parts, not because of their intrinsic value but due to the urgency of their need.

4. Government competition

The third element which may affect traffic available to United States privately owned ships is Government operation of ships such as by the MSTS. The general policy of the MSTS operation is to transport military-controlled passengers and cargo to areas either not served by private companies or to points to which privately operated tonnage is inadequate; and to move support material for military operations. However, commercial lines at times have averred that the Government operation has taken cargo which appropriately could have been carried by commercial carriers. It is not possible to estimate the extent of such traffic because of the difficulty in drawing a firm line of distinction between what is appropriately MSTS traffic and commercial traffic. However, the policy of moving military traffic to the greatest extent possible in commercially operated vessels appears sound and should be continued and extended wherever possible.

5. Possible alternative solutions

Since ocean transportation, like other transportation media, is a service industry and as such is dependent upon national and international trade for its livelihood, it is clear that the basic conditions which create fluctuations in the overall volume of oceanborne trade are beyond the control of the shipping companies. Principal basic conditions influencing the volume of commerce have been discussed more fully under the previous topic.

Financial results which United States steamship operators are able to show depend in part upon their ability to adjust to extreme fluctuations in traffic, and to deploy their fleets in areas of profitable employment. Some idea of the means available for adjusting to fluctuations in traffic can be obtained by examining some of the measures which have been adopted to meet various conditions.

The preceding analysis indicates that one of the principal problems is that of meeting peak traffic levels, which may be of relatively short duration. It is obvious that private operators will be unable to attract sufficient capital to maintain continuously a fleet adequate to meet peak traffic requirements, with the prospect of having to lay up excess tonnage once those requirements have been met. During the past 30 years extraordinary demands for shipping requiring lifting capacity beyond the ability of the United States privately owned merchant fleet have been met through the use of Government-owned tonnage which has been broken out of lay-up as the need has arisen. After those needs were met, the ships were again immobilized. Availability

of Government-owned ships for emergency use obviates the necessity for private companies to maintain large reserve capacity which would be a drain on their financial resources and permits them to concentrate on acquiring and operating a fleet which has reasonable prospect of profitable employment under more normal conditions of foreign trade.

There are certain limitations and problems involved in the use of vessels from the reserve fleet to meet commercial requirements. For example, vessels placed in the reserve fleet may not be sold without legislative authorization and are prohibited by law from being used for commercial operation, except by charter after public hearing or by the Government during periods of national emergency as proclaimed by the President. Thus, because the use of these vessels is limited, they do not act as a drug on the shipping market when the emergency passes. The twilight zone between emergency and normal conditions poses special problems in the use of Government-owned ships, particularly when such ships enter into competition with privately owned tonnage. Consequently, sound administrative judgment and restraint with respect to the level of participation of Government-owned fleet in itself could tend to encourage the attraction of new capital to the shipping industry.

Several steamship companies have established services to more than one foreign trading area and for this reason are in a position to diversify their operations. To some extent this fluidity of operations protects them from economic or political conditions which may temporarily depress the level of the traffic in any one area. It also permits greater flexibility of operation by enabling the operators to shift their vessels from a less active trading area to one more active.

Here again certain limitations, both legal and practical, are imposed which may prevent ship operators from extending their operations to several trading areas. A very practical consideration is that there may be insufficient cargo available to permit profitable operation for more than a limited number of operators. Moreover, subsidized carriers are not permitted to operate on routes and services other than those for which they hold operating-differential subsidy contracts without prior approval of the Maritime Board. In this respect there appears to have been a tendency in the United States to encourage the existence of a number of shipping companies which to a certain extent compete with each other. A number of foreign maritime nations, on the other hand, have tended to encourage the formation of very large companies or combinations, thereby lessening competition among vessels of the same flag. The possibilities of economy and efficiency, as well as improved utilization, through consolidation should be further explored.

Some United States shipping companies have been able to strengthen their financial position through industrial operations either directly or through associated companies. Some of these companies either directly or through subsidiary companies have assumed a major role in the industrial development of various countries. Such companies frequently arrange their steamship schedules so that they serve as industrial carriers in one direction and common carriers in the other. These companies are not entirely dependent upon their steamship operations, and furthermore, can count on a certain amount of company-controlled traffic for their steamship operation. Also, oil companies and other operators of tankers have placed large numbers

of ships under nearby foreign friendly registry but retain ownership either directly or through affiliated companies. This arrangement has also been used to a lesser degree by some dry-bulk carriers. Ships so registered enjoy certain financial advantage in the form of lower operating costs, less rigid safety requirements, and more favorable tax treatment. At the same time they are permitted to engage in operations wherever there is a demand for such ships, with the exception of the domestic trade of the United States.

An interesting development in passenger transportation is reflected in arrangement between some of the steamship companies, and the airlines, whereby passengers can go one way by air and return by sea, or vice versa. This arrangement enables both transport agencies to share in the passenger traffic, and probably results in the building up of additional traffic for both types of carriers.

D. INTENSITY OF FOREIGN COMPETITION

1. Competitive position of foreign-flag ships

The demand for merchant-type ships by the military during World War II and the tremendous ship-construction program which was inaugurated to meet this demand resulted in increasing the number of vessels under United States registry from 1,379 self-propelled ships of about 11.7 million deadweight tons in 1939 to 4,861 ships of about 50.4 million deadweight tons in 1946. In contrast, the number of foreign-flag ships decreased from 11,419 of 68.9 million deadweight tons to about 7,584 ships of 48.8 million deadweight tons during the same period. As a result, the United States Fleet which had represented only 14 percent of the total world deadweight tonnage before the war, represented 51 percent in 1946. The availability of this greatly expanded merchant fleet enabled the United States to participate temporarily in world traffic to a relatively greater degree than before the war. However, the rehabilitation of foreign-flag fleets since 1946 and the laying up of more than half of the United States merchant fleet has diminished the significance of the United States merchant marine in world trade. Appendix table 16 shows the number of ships and total tonnage of the principal merchant fleets of the world as of 1939, 1946, and 1952.

During World War II the carrying capacity of foreign-flag merchant marines was sharply reduced—from 68.9 million tons to 48.8 million tons between September 1, 1939, and June 30, 1946. However, it is of interest to note that several foreign merchant fleets—notably the British, Argentine, Brazilian, Pan American, Spanish, Swedish, and Russian merchant fleets—were able either to hold their prewar position or to increase the size of their merchant fleets. But other foreign national merchant marines suffered serious reductions in ship carrying capacity; notably, Denmark, France, Germany, Greece, Italy, Japan, Netherlands, and Norway.

The United States Government as part of its policy to aid in the postwar economic world reconstruction program enacted in 1946 the Merchant Ship Sales Act authorizing the sale of surplus Government-owned war-built ships to United States citizens and, with certain limitations, to foreign nationals. Under the act, 1,113 ships were transferred to foreign registry, primarily European. In addition, foreign

maritime nations have engaged in a large scale postwar building program of modern vessels specially designed for the particular trades in which they are to be employed. By the end of 1952, the merchant fleets of foreign countries had been increased by 2,995 vessels. Since the United States fleet was decreased by 1,421 vessels in the same 6-year period, largely as a result of sales of Government-owned ships and transfers of privately owned United States-flag ships to foreign registries, the net increase in the world fleet was 1,574 vessels. Thus at the end of 1952, the United States-flag fleet had declined to 32 percent of the total world deadweight tonnage. In terms of active vessels, however, United States-flag ships constituted only about 10 percent of the total.

By the end of 1952, however, the merchant fleets of all foreign-flag countries excepting Germany, Japan, and Greece had been able to increase the carrying of their respective merchant fleets above prewar levels. Of the three countries whose fleets are still below prewar levels, Germany and Japan have embarked upon large shipbuilding programs, and they are expected to provide a great deal more competition as the size of their fleets is increased.

Another element of some importance is the fact that there are some 14 countries which, for the first time, have merchant fleets registered under their own flags. Those countries previously were dependent upon foreign shipping for the oceanborne movement of commodities vital to their economies. Many of those countries are in the "soft currency" bloc, and thus are desirous of conserving their dollars by saving shipping charges that they would have had to pay had they not set up their own merchant fleets.

Not only have most foreign maritime nations rehabilitated their merchant fleets to prewar status with respect to number and deadweight tonnage, but in so doing, their rebuilding programs have resulted in a fleet of more modern and efficient vessels. As a result, their competitive position has improved even beyond that reflected in the figures showing number and tonnage of vessels.

The effect of such competition is felt in the ability of American-flag vessels to obtain a substantial share of the United States foreign trade traffic. For example, in the prewar years of 1937 and 1938, United States-flag vessels carried only about one-fourth of the total export-import dry-cargo traffic. In those years foreign-flag vessels carried practically all nonliner traffic and well over one-half of the liner traffic (57 percent in 1937 and 63 percent in 1938). In the postwar period, United States-flag vessels have fared better. Immediately after the war, when foreign-flag shipping had not yet been rebuilt to prewar levels, United States liner carryings by a substantial margin exceeded 50 percent of the total liner traffic on essential trade routes. This participation has been declining somewhat in the more recent years and during 1950, 1951, and 1952 the percentage participation in those years amounted to 47, 50, and 48 percent, respectively. Participation of United States-flag vessels in nonliner carryings is largely a postwar development and has shown wide fluctuations in percentage of traffic carried. For example, their carryings have ranged from a high of 38 percent in 1948 to a low of 10 percent in 1950, but increased again in 1951 and 1952 to 33 and 21 percent, respectively. However, a substantial portion of the United States-flag nonliner traffic during the years of high participation was carried

by vessels owned by the United States Government all of which have now been returned to the reserve fleet.

2. Other factors

There are several other elements of considerable importance affecting the competitive position of United States-flag ships. These elements include restrictions on currency, which cause the diversion of cargoes to national-flag vessels or vessels of other soft currency countries and controlled routing of cargo. The latter is accomplished by making instructed routing by foreign-flag ships part of the terms of purchase contracts, or by including similar conditions in letters of credit and the like. Foreign nationals and foreign governments also control the routing by making purchases in the United States on an f. o. b. or f. a. s. basis, thereby reserving their right to arrange for transportation.

Other practices which sometimes make it difficult for United States-flag ships to compete freely for international cargo include: (1) Granting reductions on charges levied against national-flag ships as compared with United States and other foreign-flag ships for port charges of various types; (2) granting berthing priorities to national-flag ships in areas where port congestion exists, which places United States-flag ships at a particular disadvantage because of their high operating costs; and (3) favoring national-flag fleets by reducing (in some cases up to 50 percent) the fee charged for consular invoices if shipment is made in national-flag vessels.

These other factors are discussed in more detail in the following section dealing with foreign government shipping aids.

E. FOREIGN GOVERNMENT AID

As already noted, ships under foreign-flag registry are less costly to construct and operate than comparable ships of United States registry. Even with these economic advantages, foreign governments have improved the competitive position of their respective merchant fleets by means of public assistance. These aids are both of the direct and indirect type. Some are designed to reduce ship construction costs; some are intended to lower operating costs. Others are intended to develop and stabilize national merchant fleets by preferential means or to discourage foreign-flag shipping by discriminatory methods. As a rule, foreign aid to shipping and shipbuilding is of the indirect type; nevertheless some countries provide valuable direct types of assistance as well.

1. Construction and operating aid

No uniformity exists in the types and value of assistance granted by foreign governments to their own merchant vessels; they differ in accordance with the dictates of national policy and national expediency. Aids granted to reduce ship construction costs may be in the form of construction subsidies based upon carefully defined vessel characteristics such as size, speed, and type; exemptions from customs duties on shipbuilding and ship repair materials and components; subsidies to shipyards and steel mills; loan guaranties at interest rates which are lower than those prevailing in the open market; interest contributions, and liberal amortization, and other tax benefits. Of these aids, benefits accruing from rapid amortization are most com-

mon; indeed a study of the tax legislation of 12 foreign countries whose merchant fleets are serious competitors of United States-flag vessels shows that valuable aid is granted these foreign merchant fleets in the form of rapid depreciation either in the accelerated form or by means of unrealistically high normal depreciation rates. Moreover, some countries, especially those whose currencies have been seriously inflated, permit these shipowners to base their depreciation upon replacement costs either in full or in part rather than upon original cost as is required of United States shipowners. The benefits of this tax legislation is substantial since shipowners who can take advantage of these benefits are provided with a substantial portion of the capital needed to purchase a vessel on an interest-free basis.

Aids granted to foreign shipowners for the purpose of reducing operating costs are not as numerous as those which result in lowering construction costs. Nevertheless, in some countries this type of aid is especially worthwhile. Some countries provide mail contracts which compensate their ships to a greater degree than if the mail were transported at international rates; exempt their operators from the payment of income taxes for a stipulated period of time or, like Panama and Liberia, do not provide for the payment of any income tax; provide terminal facilities at low rental rates; or grant general navigation bounties based upon the type of service operated, stipulated ship characteristics, and the number of days operated.

2. Preferential and discriminatory practices

Foreign aids described above are not considered to be undue or unjust since they do not preclude or restrict ships of United States registry from operating freely in all trade routes. However, foreign policies which grant undue preference to their own flagships or which discourage other national-flag ships from operating create problems which are of direct concern to all other flag merchant fleets operated in competition with them. Since World War II these discriminations have become fairly general in certain parts of the world, particularly in Latin America. While United States-flag ships appear to have been singled out in only a few cases as the intended target, nevertheless ships of United States registry are affected more seriously than other foreign-flag operators who are discriminated against because of the significance of the trade of their countries to their operations. For this reason, the problem will be discussed rather fully in this report.

(*a*) *Number of complaints.*—American operators in the foreign trade have reported difficulties due to laws, regulations, or practices of certain countries which are preferential to their own national-flag vessels or otherwise have a discriminatory effect on American shipping. Sometimes the intent of these laws is preferential due to a desire to favor and promote the national-flag merchant marine of the foreign country. In many cases, however, such intent is only incidental or secondary to a desire to protect the foreign exchange position or to raise revenue. Regardless of intent, practices which influence the routing of cargo away from United States-flag vessels or subject them to additional charges or obstacles are a handicap to the development and maintenance of the American merchant marine.

Since 1949 the principal cases brought to the attention of the Maritime Administration may be summarized as follows:

Items of complaint	37
Number of foreign countries	20
Number of United States-flag owners	18

Of the 18 operators reporting difficulties and requesting assistance in removal thereof the majority were subsidized lines:

Subsidized lines	12
Unsubsidized lines	3
Unsubsidized lines associating themselves with requests of subsidized lines	3
Total	18

Complaints have emanated only from companies operating berth services except for one car-ferry service. Such companies are particularly concerned because they cannot easily shift their operations as continued regular performance on the route is a necessary factor to success. United States liners must compete with the national-flag lines of foreign countries. They are therefore vulnerable to local preferential measures.

Participation of American tramps in the foreign trade in recent years has been made possible by the following special or protective situations by: (1) The existence of the immediate postwar shortage of ships pending rehabilitation of foreign fleets; (2) the employment of tramps by Department of Defense (MSTS) in military programs; and (3) the requirement that 50 percent of foreign-aid shipments move on United States vessels.

American tramps are not now generally engaged in the strictly commercial foreign trade of the United States or in the world cross-trades because of their high costs relative to foreign costs. However, should United States tramp operations be extended to the competitive tramp trades they would undoubtedly be at a greater disadvantage if they were required to accept payment in foreign currency which could be converted to dollars only at a loss.

While a few American-flag tankers have engaged in competitive commercial employment in the foreign field, most of their foreign activity has occurred in protected services such as: (1) Employment by the Military Sea Transportation Service; (2) employment for foreign aid programs shipments where 50 percent flag participation is required; and (3) employment in the service of oil companies.

In these operations, tankers are not exposed to foreign discrimination and the payment of freight charges is made in dollars. Even where oil producing and marketing companies use tankers operated by foreign subsidiaries, arrangements are usually made whereby freight charges are paid on a dollar basis. The few independent tankers engaged in foreign commercial operations, usually accept foreign currencies which are converted to dollars through broker channels.

(*b*) *Classification of complaints.*—A comparison of foreign discriminatory practices encountered by American-flag vessels in the foreign field is summarized below:

	Number of complaints
Traffic difficulties:	
Currency regulations preventing use of local currency by nonnational lines, or preventing its conversion to dollars, etc	10
Influence on routing by exchange control, import licenses, etc. (open influence, or sub rosa influences)	7
Influence on routing by preferential or dual scale of consular invoice fees paid by shippers	3
Government collective sales and purchases of goods extending into the commercial field, and favoring national-flag vessels	1
Labor regulations limiting types of traffic special carriers may handle	1
Total	22
Miscellaneous:	
Berthing preferences, delays, etc	4
Differential or dual scale of port dues, charges, and related services	4
Taxes on remittances of freight or on revenue	4
Dual scale of consular charges paid by ship	2
Required use of customs broker	1
Total	15
Grand total	37

These complaints also may be classified as to world areas as follows:

Areas involved	Items of complaint		
	Traffic	Miscellaneous	Total
Latin America	11	10	21
Europe	7	1	8
Africa	2	2	4
Asia	2	1	3
North America		1	1
Total	22	15	37

(*c*) *The currency problem.*—In the list above showing types of discriminations, a number of those included under "traffic difficulties" relate to currency and finance. For example, there were 10 cases involving currency regulations; also 7 cases of influence on routing by exchange control, import licenses, etc., some of which are also influenced by currency factors. Experience has shown that when governments attempt to protect the national foreign exchange position, they favor their own shipping, among other things. The basic principle is that if national-flag vessels are employed on a local currency basis, the dollar position is improved.

There are instances, however, particularly in South America, where government measures are specifically designed to influence shippers to use vessels of a particular national-flag fleet. There are a few cases where the dual scale of charges is calculated to exact revenue for the government. However, most of the complaints are caused by exchange difficulties. This problem probably will continue so long as dollars are at a premium in countries whose vessels also have the advantage of operating more cheaply.

Because most of the expenses of United States vessels must be paid in dollars, the currency problem, even when there is no discrimination

intended, is a serious matter for United States liners, tramps, and independent tankers. Discriminatory practices increase the disparity in costs. Even subsidized liners are affected by those practices because United States subsidy payments do not consider those charges or practices.

Unsubsidized liners, tramps, and tankers, while exercising greater flexibility of schedules, cannot completely avoid the effects of discriminations practiced by foreign countries. Inequities resulting from currency exchange apparently will continue to be an obstacle to our vessels in many trades until the world balance of trade is adjusted.

(*d*) *Preferential practices in the United States.*—In comparison with the foreign practices mentioned above, there are no similar preferential arrangements in this country favoring United States-flag ships, with the possible exception of dual scale of consular charges paid by ships. Under our statutes United States-flag vessels are exempt from the payment of fees for normal consular services, whereas foreign-flag vessels are required to pay nominal charges. Foreign-flag vessels are charged a $2 fee by our consulates for administering oath and certificate for visa of the alien crew list, with a similar small fee for optional services. Thus the differential between United States-flag and foreign-flag vessels in the United States in this respect is trivial. United States-flag vessels proceeding to certain foreign countries are obliged to pay manifest and crew list visa fees to consulates which, in one country, amount to hundred of dollars, particularly when overtime is involved. In contrast, the vessels of that particular country enjoy a 50-percent discount.

It is the standard United States practice to make the same charges against all vessels regardless of flag. Regulation in connection with export or import licenses are not influenced by the flag of vessel, nor is there any known inequity in the matter of exchange of currency. In these items, United States-flag vessels have justifiable complaints regarding the preferential practices of certain foreign countries.

Whereas the statutes authorize collection from foreign vessels of tonnage dues and light money which are not levied against our own vessels, the statutes also provide that they may be eliminated by treaty, Presidential proclamation, or special act of Congress. In practice they are waived by one of these approved methods. There are also one or two other minor preferential measures in the statutes which are not applied.

Cargo preference provisions of the foreign assistance laws are not regarded as being in this category and are discussed at a later point in this study.

(*e*) *Possible alternative solutions.*—An indication of the progress made toward adjustment of complaint of discriminatory practices is given in the following table:

	Traffic	Other	Total
Items adjusted	4	4	8
Items temporarily or partially adjusted	5	1	6
Adjustment promised	2		2
Status uncertain or situation changed	3	1	4
Recent difficulties under negotiation	3	1	4
Unsatisfactory outcome (negotiations will be continued on most)	5	8	13
Total	22	15	37

On occasions United States-flag liner companies have made progress toward removal of preferential licensing arrangements and other obstacles by reaching agreements through their own efforts. In some instances, foreign governments have relaxed their restrictions. Generally, however, the measures taken by the lines themselves have proven inadequate without supplemental support from the Maritime Administration and/or the Department of State. Some inequities have been overcome by the action of the Maritime Administration in granting waivers whereby vessels of foreign nations may participate in movement of traffic financed by the Export-Import Bank.

In a few instances relief has been obtained solely through diplomatic representations. However, when there is a strong desire on the part of a foreign country to favor and develop the national merchant marine, or when the currency issue is serious, prompt relief may not be easily obtainable. In such cases, other methods must be employed to alleviate the problem.

One method used at times by the Government is to take advantage of negotiating opportunities. Such an opportunity arises in connection with Public Resolution 17 and loans of the Export-Import Bank. Whereas the resolution requires shipment by United States-flag vessels unless the Maritime Administration certifies they are not available, recipient-nation vessels, under waivers of the total United States-flag requirement, may be allowed to participate with our vessels. When countries which engage in discriminatory practices have applied for such waivers the Maritime Administration has utilized the opportunity to request the removal of the offending regulations in return for participation in Export-Import Bank traffic. Within the last year waivers of this nature have materially influenced the relief measures obtained from two foreign nations; in several previous cases they have contributed to solutions obtained. Additionally, waivers have been granted to countries which have not adopted discriminatory practices upon their assurance that the existing equitable treatment of our vessels will continue. On the other hand, waivers have been denied to two countries in view of their persistent policy of discrimination detrimental to United States-flag ships.

Other activities of our Government offer potential opportunities for exerting a helpful influence, particularly where grants are made to foreign interests. Under our foreign-aid programs, most of the statutory enactments provide that 50 percent of the shipments shall move by United States-flag vessels. There is no statutory provisions as to how the other 50 percent shall move and it is usually carried by vessels of the recipient nation or such other vessels as that nation desires to use. In cases of discrimination which have not been adjusted by other means, it may be possible for our Foreign Operations Administration to bring about a satisfactory solution.

Another avenue is through section 26, act of 1916. Under this statute, the Federal Maritime Board is directed to investigate complaints and report to the President, who in turn is authorized to employ diplomatic action to obtain equal privileges for our vessels in the foreign trade. Failing in this effort, the President may make recommendations to Congress in a special message. The Board and its predecessors have acted under the instruction to investigate discriminations, but the balance of the procedure has generally been short-circuited by direct presentation to the Department of State for nego-

tiation. This has the advantage of less publicity and probably prompter action. The full procedure contemplated in section 26, however, may be desirable in some cases.

Section 19, Merchant Marine Act of 1920, authorizes the Federal Maritime Board to make rules and regulations affecting shipping in the foreign trade to meet unfavorable conditions arising out of foreign laws, rules, or regulations or competitive practices. This procedure has in the past been applied in the case of unfavorable acts by foreign shipping interests. It may be useful when diplomatic negotiations have been unsuccessful and further action appears necessary.

Treaties with foreign countries offer another possibility; the Department of State has already negotiated treaties of friendship for commerce and economic development with certain countries, containing shipping clauses which should eliminate most discriminations against our vessels when trading with those countries. However, its application has not as yet been extended to those countries where such discrimination is acute. Treaties are generally broad in scope and cover many activities, often requiring several years for negotiation and approval. They should not be looked upon as a prompt means of disposing of discriminatory practices. However, once negotiated, they should assist materially in preventing new cases. In this connection, reciprocal agreements of a special nature, including those to avoid dual taxation, offer better prospect of prompt conclusion than general treaties.

One other possibility is the use of multilateral agreements brought about as a result of joint action through an international organization such as the International Maritime Consultative Organization (IMCO). This subsidiary agency of the United Nations for international maritime matters has not as yet received ratification of the required number of countries and cannot be looked upon as an immediate source of remedial action.

It is believed that the best method of eliminating discrimination against United States-flag vessels by foreign governments is through diplomatic negotiation, both informal and formal, and in utilizing with these negotiations every opportunity in which the foreign nation desires some concession from the United States. This procedure requires the close cooperation of the Department of Commerce and the Department of State.

In view of the many activities of our Government in support of foreign governments or enterprises in which they are interested, the cooperation of all agencies of our Government may reveal additional opportunities to influence foreign nations in these matters.

F. BLOCK OBSOLESCENCE AND VESSEL REPLACEMENT

Eighty-one percent of the 1,297 ships comprising the commercially operated United States domestic and foreign fleet will be 20 years old during the period 1961 and 1965. Appendix table 15 shows the replacement year of the ships in the present active fleet, based on a 20-year life. Approximately the same percentage of the Government-owned reserve fleets and ships operated for the Government will also be 20 years old during the same period. If the active ships are to be replaced when they become 20 years old, a total of 936 keels would have to be laid within the 3-year period from 1961 to 1963. This is

the substance of the "block obsolescence" problem facing this country. This problem is not new; it is merely a repetition of the post-World War I ship-replacement problem as evidenced by the following quotation. In 1937 the Maritime Commission reported to Congress that:

> The outstanding weakness of our merchant marine is its high degree of obsolescence. This is true not only of the total seagoing fleet but of the various subdivisions. As of May 31, 1937, there are 1,422 oceangoing vessels (of 2,000 gross tons and over), aggregating 8,407,000 gross tons, registered under the American flag. Of this fleet a total of 1,305 vessels of 7,402,000 gross tons (91.8 percent of the number and 88 percent of the tonnage), will be 20 years old or more by 1942. More than 400 vessels, aggregating nearly 2,500,000 gross tons (about 30 percent of both number and tonnage of the entire fleet), are already 20 or more years old.[20]

The American merchant marine is again fast approaching this same condition.

1. Shipyard facilities and labor

It is clear that if replacements are to be made only when ships become 20 years old, shipyard facilities will be required in much greater number than those now in active operation and the labor-employment level would be greatly in excess of that which is economically desirable. The peak shipbuilding years would require 174 shipways, whereas only 63 active commercial ways are currently available. Moreover, a maximum of approximately 225,000 shipyard workers would be required, as contrasted with the 1953 employment level of about 23,000 workers. Between now and the peak period, the shipyards would have little or no work, and the shipyard employment required as a nucleus for national defense would not be available. Consequently, any realistic program of ship replacement must be based upon a policy of spreading the replacement work over a longer period of time—a policy which is so important that it cannot be stressed too highly. A number of ships should be replaced before the end of their useful life and some vessels must be continued in operation when normal practice would require their replacement.

2. Factors affecting ship construction

(*a*) *Present reliance by operators on war-built ships.*—The bulk of the United States-flag fleet is composed of war-built ships acquired under the Ship Sales Act at prices which ranged from about $50 to $120 per deadweight ton.[21] Even assuming a maximum subsidy of 50 percent, the current cost of new ships to operators would be approximately $150 per ton for an average tanker and over $300 per ton for an average dry-cargo ship. While some part of the increase is due to higher speed, modern cargo-handling gear, improved crew accommodations, and other features, estimated shipbuilding costs have more than doubled since 1939. Operators are reluctant to invest additional capital for the replacement of their existing ships so long as they can be operated at a profit. Such a situation does not encourage much new construction at a time when most vessels are only about 10 years old.

(*b*) *Suitability of war-built ships for competitive operation.*—Most of the dry-cargo ships operated by the subsidized operators are of the

[20] Economic Survey of the American Merchant Marine, U. S. Maritime Commission, November 10, 1937.

[21] The Ship Sales Act of 1946 contained a formula for determining the sale price of ships. The minimum sales prices determined under this formula were: Liberty ships, 31½ percent of their war-construction cost; other dry-cargo ships, 35 percent of their war-construction cost; and tankers, approximately 50 percent of their war-construction cost.

war-built C-type cargo ships which form the modern portion of the United States fleet and operate at speeds ranging from 14 to 16½ knots. The nonsubsidized dry-cargo operators also operate some C-type and Victory-type ships, but they operate a large number of 10-knot Liberty ships and other miscellaneous types of vessels.

During the past 30 years, the speed of tramp ships has increased from 10 knots to about 14 knots and the speed of ships in liner service has increased to about 18 knots. Improvements also have been made in cargo-handling gear and in crew accommodations to meet increased habitability standards. In addition, more efficient powerplants are required to offset greatly increased fuel costs and additional facilities are being provided for carrying frozen and refrigerated foods. Fleet modernization is a problem confronting all maritime nations in the world, but countries whose fleets were markedly reduced in size during World War II and are rebuilding or expanding their fleets with new construction do not have a serious obsolescence problem. Many of the fleets of these countries are now composed of such a large proportion of new ships that they are in a better competitive position than the United States fleet, and others soon will be.

In general, only that portion of the war-built dry-cargo fleet consisting of the C-type ships are still competitive with ships of other nations, and even these are encountering increased foreign competition. The remainder of the war-built dry-cargo fleet is already obsolete by most standards of comparison and may be considered submarginal for most commercial purposes.

(*c*) *Suitability of war-built ships for military and defense requirements.*—Most of the war-built fleet is not suitable for military and defense requirements which place emphasis on speed, fuel economies, and cargo handling. On June 16, 1953, Rear Adm. R. E. Wilson, United States Navy, Deputy Commander and Chief of Staff, Military Sea Transportation Service, stated before a Senate committee [22] that the minimum speeds desired for military service should be 18 knots for dry-cargo ships, 22 knots for troopships, and 20 knots for tankers. Admiral Wilson further stated that fuel-consumption economies and modern cargo-handling facilities were of primary importance to defense planning.

3. Need for a long-range shipbuilding program

The foregoing analysis of the problems resulting from the existence of a large war-built fleet leads to the following conclusions:

(*a*) The solution of the "block obsolescence" problem is of primary importance to the United States.

(*b*) The presence of large numbers of war-built ships purchased at favorable prices does not provide operators with an incentive to replace their ships at this time.

(*c*) The replacement of the active commercial fleet based on 20-year ship-life expectancy will result in uneconomic shipway and shipbuilding labor requirements.

(*d*) National defense requires that submarginal war-built vessels still operated in the active merchant fleet be replaced as soon as possible.

[22] Merchant Marine Studies, hearings before Subcommittee on Maritime Subsidies, Senate Committee on Interstate and Foreign Commerce, 83d Cong., 1st sess., pt. I, May-July 1953, p. 68.

A long-range program of 50 ships per year for 10 years was undertaken in 1938, which permitted the development of shipbuilding facilities and the employment of shipyard labor to the point where they could be expanded quickly to meet World War II requirements. The country is faced with practically the same block obsolescence problem today as existed in 1938. A shipbuilding program of 60 ships a year is of sufficient magnitude to solve these problems and also meet our shipyard nucleus requirements.

One approach is the development of a program based upon an analysis of the individual replacement requirements of all United States operators. Such a planning policy would be basic to the creation of an overall program designed to meet both the commercial and national defense shipping needs of the country. It is believed that the problems created by the existence of the war-built fleet can be solved only by a carefully phased long-range shipbuilding program. Government guidance and assistance is essential for the implementation of such a program.

V. Present Shipping Policy and Government Aids

A. NATIONAL SHIPPING POLICY

This country's merchant marine policy, which may be found in many legislative enactments over the past three decades, is clearly set forth in section 2 of the Merchant Ship Sales Act of 1946, which declares it to be the policy of the country to foster the development and encourage the maintenance of a merchant marine built in the United States and owned and manned by United States citizens and operated under the United States flag in order to (1) transport all the domestic waterborne commerce; (2) transport a substantial portion of the United States foreign commerce; (3) provide service on all routes essential for maintaining the flow of waterborne commerce at all times; and (4) serve as a naval and military auxiliary in time of war or national emergency.

In addition, Congress has declared that the merchant marine must be supplemented by efficient American-owned facilities for shipbuilding and ship repairs, marine insurance, and other auxiliary services.

1. Transportation of all domestic waterborne commerce

The policy of reserving the domestic waterborne commerce of the United States to vessels built in the United States and owned and operated by United States citizens is as old as the United States Government itself. This policy has justified itself over the reach of the years by providing the United States during national emergencies with a substantial number of vessels of various types. Moreover, this policy has provided employment for a large number of seamen and a market for the products of American shipyards and other industries. In view of current international conditions and the essentiality of shipping to our military needs and our civilian economy, this policy should not be discontinued. United States-flag ships engaged in the domestic trade are of special significance in a national emergency since they are immediately available.

2. Transportation of a substantial portion of the United States foreign commerce

Ocean transportation is absolutely indispensable to our industrial and agricultural economy in view of our large export and import trade. The need for ocean transportation is so vital to our defense and civilian needs that the country cannot afford to depend upon the shipping facilities of other countries. History shows that each country, particularly in time of emergency, utilizes its own shipping resources in furtherance of its national interests. The withdrawal of foreign shipping facilities for any reason would have disastrous results upon the welfare of our country if we were dependent upon them to any great extent. Under existing world conditions, foreign countries might withdraw their merchant fleets at any time from the trade routes essential to the United States and place them in other services required by their national interests. In this event the United States, if dependent upon foreign-flag merchant marine services, would not have the ocean transportation resources needed to conduct its essential trade.

3. Provision of service on essential trade routes

The Merchant Marine Act, 1936, emphasizes the essential trade route concept. Until 1952, both construction and operating-differential subsidy aid were limited to vessels employed on routes declared to be essential. Although construction subsidy assistance subsequently was made available to all ships to be used in the United States foreign commerce, operating subsidies still are limited to vessels operating over essential trade routes.

The essential trade route concept is sound and has proved its value in the liner service. It has aided materially in the development and maintenance of a well-balanced United States-flag liner fleet in the foreign trade of the United States. It has minimized uneconomic competition among subsidized liner operators and strengthened their positions in their competition with foreign-flag liners. It has proved its value in providing regular liner service by United States-flag ships from each of the major United States coastal areas, thus promoting the foreign commerce by contributing to the development of additional port facilities and new types of cargo. All these factors contribute to the national defense potential of the active fleet and the financial stability of the United States-flag shipping industry.

4. Capacity to serve as a naval and military auxiliary in time of war

There can be no question of this country's need for a strong and adequate merchant marine in time of national emergency. This study has already indicated the requirements for a merchant marine imposed by the national security.

5. Future shipping policy

The present national policy as expressed in the preamble of the Merchant Ship Sales Act of 1946 with reference to the promotion and maintenance of the American merchant marine is sound and should be continued. The important elements embodied therein set forth clearly and succinctly the essentiality of an American merchant marine to our commercial and national defense needs. While the means employed to attain the objectives prescribed may require changes from time to time, the importance of the merchant marine to national

welfare and security demands that the Nation assure their achievement. Both industry and the Government share this responsibility. In keeping with the national principle of private ownership and operation, the industry has the responsibility of utilizing its experience, skill, personnel, and financial resources to the fullest possible extent in the attainment of the objectives of the Nation's merchant marine policy. The Government must stand ready to assist the private shipping industry. The extent of Government aid, of course, should be limited to the minimum amounts required consistent with the merchant marine and national transportation policies and the overall responsibilities of the Government to the national welfare.

B. THE PARITY CONCEPT

The declared shipping policy of the United States is to foster the development and encourage the maintenance of a privately owned and operated merchant marine adequate for the commercial and defense needs of the Nation. In recognition of disadvantages faced by the American shipping industry in competition with foreign-flag ships, the Merchant Marine Act, 1936, provides for assistance to the industry in the form of operating and construction subsidies. The basic principle of this assistance is parity; i. e., to grant subsidy when required to equate approximately American shipping companies' costs of construction and operation with those of their foreign competitors.

In brief, the construction subsidy is intended to provide United States-flag ship operators with certain types of vessels at prices comparable to those paid by foreign-flag ship operators for vessels of similar plans and specifications which they could purchase in a foreign shipbuilding center deemed by the Board to furnish a fair and representative example. The operating-differential payment is designed for the purpose of providing United States-flag operators who meet certain requirements with a subsidy based upon the difference between certain specific items of expense set forth in the act as well as other items of expense in which they are at a substantial disadvantage in their competition with foreign-flag operators whose competition is deemed to be substantial. Countervailing subsidy assistance is authorized to be paid by the Board after consultation with the Secretary of State to meet a situation in which operating-differential subsidy aid is inadequate to offset the effects of governmental aid paid to foreign competitors. So far the aid granted to United States-flag ship operators has been limited to construction-differential and operating-differential aid; none has been granted in the form of countervailing subsidy assistance and no applications for such aid are pending.

The practice of assisting domestic industry which must compete with foreign industry is not uncommon to the United States. It is, in fact, the central idea of the protective tariffs and import quotas which, while no direct subsidy is involved, tend to equalize or favor competitive opportunities for affected domestic industries.

Neither is the parity of cost idea new as a device upon which to base assistance. The concept in legislative form was employed during the early 1920's as a method of determining tariff rates. It was adopted with respect to ship subsidies in 1936 after Congress concluded that aid to shipping should be provided in a direct form rather than indirectly by means of mail contracts or other similar methods.

One of the major problems considered by Congress in adopting the parity principle was the threat that the relatively higher costs of constructing ships in American shipyards and operating ships under the United States flag would induce American shipping interests to invest in foreign-built ships which would be operated under a foreign flag. So that these interests would not be penalized for cost differences which are largely beyond their control, such differences are made up by the Government when required by a differential subsidy. In no sense does it guarantee the contractor a profit, but places him only in a position where he can compete on reasonable terms wi h foreign shipping. Congress hoped that by so equalizing competitive conditions, American shipping interests would have no inducement to go foreign.

In the absence of Government assistance, it is doubtful that American shipping relying on its own resources could compete successfully for the export and import trade. National defense needs, however, dictate that the United States maintain a modern and sizable fleet in active operation. If United States private shipping were not available, the Government would be required to own and operate the necessary facilities and services contrary to the American ideal of private enterprise. The parity principle, by basing assistance on the amount required to equalize approximately the cost disadvantages to American shipping but not guaranteeing profits, leaves to private enterprise the task of otherwise conducting a successful business in accord with the accepted American practice.

Effective administration of the parity concept as embodied in the Merchant Marine Act requires the determination of United States and foreign costs in establishing the amount of subsidy to be paid. The costs of United States shipbuilders and subsidized operators are readily obtainable. The basic difficulty encountered in the administration of the parity concept is the collection of foreign-cost data. While much general cost information is obtainable in some areas, only limited information is available in others. Specific and detailed operating and construction costs are most difficult to obtain, principally because of the natural reluctance on the part of foreign competitors to divulge such information. Moreover, as the intensity of competition increases, the difficulty of obtaining that type of information will become more acute.

The wording of the act itself indicates that Congress recognized that problems would be encountered in securing the actual cost of building and operating foreign-flag ships. The language in sections 502 (b) and 603 (b) of the Merchant Marine Act, 1936, as amended, include the words "estimated fair and reasonable costs" in determining foreign costs.

Thus, the inability to obtain complete foreign-cost experience, which in the past has given rise to controversy over the basic soundness of the parity concept, does not preclude its use as a basis of Government aid in achieving the objectives of our national shipping policy. The Federal Maritime Board/Maritime Administration, by employing indexing and other statistical techniques with foreign-cost information which it considers representative, has been able to calculate differential rates which the Maritime Board has found to be fair and reasonable as contemplated by the act.

In establishing foreign costs for use in calculating operating-differential subsidy rates, a manual of general procedures was approved by the Federal Maritime Board and is now in current use. Amendments to this manual have been made from time to time. The manual itself and the revisions, as well as the rates determined thereunder, have been reviewed by the General Accounting Office. A similar approach to the establishment of construction-differential subsidy rates would aid in the solution of the difficulties now encountered.

The parity concept appears to be the best method that has been suggested for granting operating and construction subsidy to American shipping. In measuring its results thereunder, it must be recognized that while complete foreign-cost data is difficult if not impossible to obtain, the Federal Maritime Board has produced estimates which it regards as "fair and reasonable" with something less than exact data. The Board is continuing and intensifying its efforts to obtain more complete coverage of foreign-cost information to the end that subsidy rates will more closely approach actual competitive cost differences.

C. EXISTING GOVERNMENT AIDS

1. Construction-differential subsidy

(*a*) *Description.*—The Federal Maritime Board is authorized to grant "construction-differential-subsidy" aid to citizens of the United States in the construction of new vessels to be used in the foreign commerce of the United States.

This construction-differential-subsidy aid may equal but not exceed the excess of the bid of the shipbuilder constructing the proposed vessel in an American shipyard over the fair and reasonable estimate of cost, as determined by the Board, of the construction of the proposed vessel if it were constructed under similar plans and specifications in a foreign shipbuilding center which is deemed representative by the Board. The cost of national-defense features is determined by the Board and paid by the Government. The cost is not included in the price of the ship ———— of the amount of construction subsidy. The construction-differential subsidy cannot exceed 33⅓ percent of the American construction cost of the vessel (excluding the cost of national-defense features) except that in cases where the Board possesses convincing evidence that the actual differential exceeds that percentage, it may grant an allowance not to exceed 50 percent.

The plans and specifications of the proposed ship must receive Navy Department approval.

While under the act as passed in 1936 such aid was limited to vessels to be used on an essential service, route, or line in the foreign commerce of the United States, amendments passed in 1952 authorized the granting of such aid in connection with the construction of any vessel to be used in the foreign commerce of the United States.

In approving applications for construction-differential subsidy aid the Board is required to determine that: (1) The plans and specifications call for a new vessel which will meet the requirements of the foreign commerce of the United States, will aid in the promotion and development of such commerce, and will be suitable for national defense or military purposes in time of war or national emergency; (2) the applicant possesses the ability, experience, financial qualifica-

tions, and other qualifications to operate and maintain the proposed vessel; and (3) the granting of the aid is reasonably calculated to replace wornout or obsolete tonnage with new and modern ships, or otherwise carry out effectively the purposes and policies of the act.

Construction-differential subsidy aid may also be granted in connection with the reconstruction or reconditioning of an existing vessel, but only in exceptional cases after thorough study and a formal determination that the proposed reconstruction or reconditioning is consistent with the purposes and policies of the act.

National defense features are those which are certified by the Secretary of the Navy as useful for national defense purposes and which are determined by the Board to be in excess of commercial requirements or the cost of which is disproportionate to their commercial utility.

The purchaser is required to pay in cash 25 percent of the ship selling price (which corresponds to the estimated foreign construction cost of the ship less the cost of the national defense features, if any), and may pay the balance of the purchase price in not to exceed 20 equal annual installments with interest at the rate of 3.5 percent. The unpaid balance of the ship's purchase price is secured by a mortgage on the vessel. The act requires that any vessel with respect to which a differential subsidy is granted must remain documented under the laws of the United States for not less than 20 years or so long as any principal or interest on account of the purchase price is due the United States, whichever is the longer period.

The act provides two methods under which the Board may enter into contracts with purchasers for the building of new ships. A construction-differential subsidy may be granted in connection with the sale of a ship constructed by the Board. In such a situation an appropriation is made by Congress for the full cost of the ship. The Board on the basis of competitive bids awards the construction contract to the low bid American shipyard and the Board pays to the shipyard the contract price of the ship. The ship is sold by the Board to the American operator, at a price equal to the estimated foreign construction cost of the ship (less national defense features). The purchaser pays 25 percent of the sales price, with the balance secured by a mortgage, payable in 20 equal annual installments, with interest at 3.5 percent. This method has been used in most instances when construction aid has been granted.

The Board may also grant construction-differential aid for the construction of a ship where the ship is constructed by a shipyard for the American operator. In such case the operator is responsible for the payments to the shipbuilder and for the financing of the construction cost of the ship. The Government pays only the construction subsidy aid, and does not provide mortgage financing for the balance of the cost; accordingly, smaller appropriations by the Congress are required.

The general purpose of the construction-differential subsidy provisions of the 1936 act is to place the American ship operator in a position of parity with its foreign competitors insofar as the cost of the ship is concerned. Thus, it is possible for the American operator to acquire an American-built ship at a price for which he could purchase a ship in a foreign shipyard.

(*b*) *Results of the program.*—In the period from the enactment of the 1936 act to December 31, 1952, 247 ships were constructed and

sold to American ship operators for operation in the foreign trade of the United States under the construction-differential subsidy provisions of the 1936 act. In the same period, 47 American-built dry-cargo ships were sold without construction subsidy. Under the prior Merchant Marine Acts of 1920 and 1928, by which construction loan aid was authorized, only 58 seagoing dry-cargo ships of 1,000 gross tons and over were built in the United States for operation under United States registry in the period 1928 through 1936.

The construction-differential subsidy payable by the Government at the time the 247 vessels were constructed amounted to approximately $426,185,833. The amount of subsidy payable on the 3 recently built passenger ships included in the above figure is estimated. Additionally, the subsidy amount includes only preliminary figures of the subsidy paid with respect to 116 of the 247 ships, the price of which was adjusted under the Merchant Ship Sales Act of 1946. As they were in effect priced under the sales act, no final subsidy figure has been or need be arrived at. The preliminary subsidy figure on these ships amounted to $230,553,371.

As may be seen from the foregoing results, the construction subsidy provisions of the 1936 act have been used in the construction of a large number of ships. In view of the age and condition of the United States fleet in the period prior to the war and after the 1936 act, it appears clear that a substantial number of vessels would have been built under its provisions by the subsidized operators if they were to receive the operating-differential subsidy aid. It is also true that the war with its destruction of vessels and greatly expanded demand for vessels prompted operators to acquire new ships which the Government was building for war purposes. As a result of the mammoth shipbuilding program, the Government owned more than 5,000 ships at the close of World War II. In order to dispose of these ships, Congress enacted the Merchant Ship Sales Act of 1946 under which a total of 843 ships were sold to United States citizens for United States-flag operation. Thus the major portion of the present United States merchant fleet is the result of wartime construction and the Ship Sales Act rather than the Merchant Marine Act, 1936, as amended.

Since these vessels have not as yet reached the end of their economic life and their replacement would require capital outlays of from 4 to 5 times the price paid under the terms of the Ship Sales Act, operators have been reluctant to build new ships even with construction subsidy.

(c) *Appraisal of the program.*—At present, not a single ship is being constructed under the subsidy provisions of the 1936 act. Even though construction-differential subsidy aid was made available in 1952 for any ship to be operated in the foreign commerce of the United States, applications for construction aid for only 14 ships (5 passenger-carrying ships, 3 ore and 6 tankers) are pending before the Board, all of which except for the tankers, were filed by operators receiving operating-differential subsidy. However, no funds have been made available for the construction of these ships even though the applications for the passenger ships have been under consideration by the Board for the past several years and 4 of those ships would replace vessels which already are more than 20 years old. Construction subsidies have been awarded on 3 large passenger-type vessels since World War II, but the amount of each subsidy contract has been the

subject of a great deal of controversy for the past several years and no final determinations have been reached.

The difficulty in estimating construction differentials has long been recognized. In November 1937 the Maritime Commission in a special report to Congress stated that—

> the Commission's experience thus far in the allotment of differentials indicates it will be extremely difficult to determine the "parity" envisioned in the 1936 act. Considerable trouble has been encountered in obtaining reliable and accurate cost data in foreign shipbuilding centers. A mathematically accurate differential cannot be determined. At best only a rough approximation of the construction differential can result from comparison between foreign and domestic costs.[23]
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> * * * * * * *
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> Careful study of the whole situation with regard to construction differentials, operating differentials, and countervailing subsidies indicates that any information assembled on these subjects is likely to be little more than a rough guess.[24]

Ten years later, November 1947, the Advisory Committee on the Merchant Marine reported to the President of the United States that—

> the 1936 act provides for a precise and theoretical determination of the amount of the construction-differential subsidy. The committee finds that the uncertainty of industrial conditions, both at home and abroad prevents a satisfactory determination of this differential.[25]

In August 1950, a Senate committee stated:

> in recent months, a great deal of * * * wrath has crashed down upon the shipping industry along with governmental shipping policymakers and administrators which has * * * cast doubt upon not only administrative decisions but also the very philosophy underlying aid to shipping generally * * *. Some of the criticism has been constructive * * *; other of it has been based on unrealistic preconceptions and have therefore been singularly destructive.[26]

In June 1952 the Chairman of the Federal Maritime Board stated before a congressional committee—

> you will note that every step of this procedure [determination of construction-differential subsidy] depends upon estimate and leaves to the judgment of men the interpretation and evaluation of data which is not only limited but difficult to procure. The executive branch is required first to determine what foreign shipbuilding center it deems to furnish a fair and representative example for the comparison. It is required to prepare a "fair and reasonable" estimate of the cost of the ship in that foreign shipbuilding center as if it were built "under similar plans and specifications" excluding national-defense features. In addition to these problems in the postwar period and beyond, the political and technological changes which had occurred, there are the violent economic problems of inflation both at home and abroad and the growing unofficial black-market transactions in foreign currency. In September 1949 this European inflation resulted in the official 30 percent devaluation of the British pound sterling followed by the corresponding devaluations of the currencies of the other Western European nations.[27]

These quotations are only a few of the statements which have been made by responsible persons, but they cover virtually the whole period since the enactment of the Merchant Marine Act, 1936.

In August 1950 the Chairman of the Federal Maritime Board formalized the appointment by his predecessor of an independent committee to review the six passenger-vessel sales contracts which had been

[23] Economic Survey of the American Merchant Marine, November 1937, p. 70.
[24] Ibid., p. 77.
[25] Report of the President's Advisory Committee on the Merchant Marine, Washington, D. C., November 1947, p. 9.
[26] Merchant Marine Study and Investigation, final report of the Senate Committee on Interstate and Foreign Commerce, Rept. No. 2494, Washington, D. C., 1950, pp. 2-3.
[27] Redetermination of vessel sales prices of the SS. *Independence* and SS. *Constitution*, hearings before special subcommittee of the House Committee on Merchant Marine and Fisheries, Washington, D. C., June 1952, p. 8.

entered into by the Maritime Commission. This committee reported that the five following methods are available for estimating the cost of these vessels: [28] (1) Obtaining bids from foreign shipyards on the plans and specifications of the vessels under consideration; (2) comparison with the total cost of similar vessels which have been constructed in foreign yards; (3) estimating by ascertaining and using ratios between foreign costs and United States costs of hull, machinery, and equipment; (4) estimating by the relationships between categories of cost such as labor, steel place, joiner work, main engines, auxiliary machinery, and equipment; and (5) estimating foreign cost in detail by paralleling every item in the detailed estimate of the successful United States bidder with a corresponding estimate of foreign cost.

The committee in appraising these five methods of estimating foreign shipbuilding costs states—

> that the most accurate method was to parallel every item of labor and material in the detailed estimate of the successful United States bidder with a corresponding estimate of foreign cost based upon data carefully accumulated and verified from every available source.[29]

This method was adopted by the staff of the Maritime Administration which reviewed the calculations made previously by the Maritime Commission, but not to the degree of considering every item of material. The staff has completed recalculating all the construction differentials which had been approved by the Commission since 1947, but with the exception of those determined for the steamship *Constitution* and the steamship *Independence*, no action has been taken by the Federal Maritime Board to approve or disapprove these redeterminations.

This method was adopted by the staff of the Maritime Administration in their review of the calculations made previously by the Maritime Commission, but not to the extent of considering every item of material. It was also used in the calculations of the costs differential for the Mariner class vessels to the extent of pricing of all of the items of material except those for which foreign costs were not available. The staff, in calculating the subsidy rate for the Mariners, was able to compare the detailed estimates of the successful United States bidder with reported foreign material costs to the extent of about 90 percent of the total materials involved.

This procedure was adopted in the recalculations of the subsidy determinations for the steamship *Independence* and the steamship *Constitution*, as well as the recalculations of subsidy for recondition and reconstruction of vessels of American President Lines, Inc., Mississippi Shipping Co., Inc., and Moore McCormack Lines, Inc. The Federal Maritime Board believes that this approach results in determinations which are "fair and reasonable," and accomplishes the purposes of the construction-differential subsidy provisions of the 1936 act.

(*d*) *Future effectiveness of the program.*—As has been stated above, a shipbuilding program of 60 ships per year is necessary to sustain a shipbuilding industry of sufficient size to meet mobilization requirements and to eliminate the block obsolescence problem. Such a construction program will be most difficult to accomplish because of the

[28] Ibid., p. 78.
[29] Ibid., p. 78.

uncertainty surrounding shipbuilding subsidy contracts brought about by the controversy over the amount of the construction subsidies awarded to the three large passenger-type ships—steamship *United States*, the steamship *Independence*, and the steamship *Constitution*. Certainty of contract is basic to any program if private enterprise is to be expected to finance any appreciable amount of a program.

However, it should be clearly understood that even if construction-differential subsidy contracts are placed on a definite basis a 60-ship-a-year program will be most difficult to accomplish during the next 5, and possibly 10 years, because most of the ships now being operated have not reached the end of their economic usefulness. Consequently, shipowners under existing provisions of law, have little or no incentive to replace most of their vessels until such time as it is to their interest to do so. Nevertheless, the problem of eliminating the uncertainty surrounding the amount of construction subsidy is important because of the number of ships involved in the applications which are pending and of the possibility that a number of the ships which are more than 20 years old may be replaced in the next few years.

(*e*) *Possible alternative solutions.*—Several methods have been suggested for overcoming the lack of finality in construction subsidy contracts and to place such contracts on a businesslike basis by developing a system that would simplify the methods of calculating the subsidies and permit prompt determinations. Clearly, some method must be found for removing the necessity for computing individual subsidy rates if the 60-ship-a-year program is to proceed in an orderly way.

One method would require the Congress of the United States to legislate a fixed differential rate designed to attain an approximate measure of parity either for all types of vessels or for each major type of vessel (dry-cargo freighter, tanker, passenger-type). A permanent rate for any particular ship is likely to be either more or less than the ratio of the difference between United States cost and the foreign cost of the particular ship. Thus it would depart from the parity principle somewhat. However, this method has an advantage in that ship operators would know that a statutory rate would provide finality to all contracts entered into under the authority of the legislation and assure that prompt action would be taken on all construction applications since no time would be required to calculate the rates.

A second suggestion contemplates the submission of rates to the Congress determined by the Board after public hearings. These rates would be effective unless the Congress within a specified period after its submission modified the rate. This recommendation is considered of benefit to all parties concerned because (1) the work involved in determining construction subsidy rates would be simplified and expedited, (2) all contracts would be final and binding except for those involving fraud or mutual mistake of fact, and (3) full publicity would be assured because of public hearings held by the Federal Maritime Board and appropriate congressional committees. It is recognized, however, that the hearings before the Board and congressional committees would require a certain amount of time and in addition would in effect place in Congress the responsibility now vested in the Maritime Board for construction subsidy determination.

A third suggestion would require the Federal Maritime Board to provide a manual of procedures for the determination of construction-differential subsidy rates similar to the determination of operating-differential subsidy rates. This manual of procedures could be developed at conferences in which expert technicians and statisticians of the Maritime Administration, General Accounting Office, Treasury Department, and other interested governmental agencies, as well as representatives of the subsidized lines themselves are in attendance. Each basic step in the procedure, as well as assumptions and statistical techniques, should be adequately tested and determined to be basically sound.

It may be desirable to request a review of the proposed procedures by a group of experts not associated with the shipping industry but selected for their special knowledge of statistical analysis.

Under these procedures the Board would determine rates for major types of ships (drycargo, tanker, combination) which would be published in the Federal Register with opportunity given to interested parties, including Government agencies, to present their views at a public hearing if required. After consideration of such views, the Board, after publication, would use such rates in entering into subsidy contracts. Provisions should be made for periodic review of the published rates under the procedures as outlined above.

This method has the advantage of providing: (1) A sound procedure for the determination of construction subsidy rates; (2) an understanding of the methods to be employed in the determination of subsidy rates by all interested parties, with an opportunity for them to be heard prior to the establishment of the rates; and (3) simplification and expedition in administration.

The formulation of procedures and establishment of rates thereunder, as outlined above, will unquestionably require a considerable period of time, during which period the construction program should go forward. For this reason, it seems desirable that Congress establish temporary rates which would be used in construction-differential subsidy contracts during the interim period.

Overcoming the lack of finality in construction subsidy contracts and simplifying the methods of calculating the subsidy to permit prompt determinations in line with the foregoing suggested changes will remove a serious obstacle to the success of the necessary shipbuilding program. It will not, however, of itself provide the impetus private capital needs to build the ships. Ship construction for private account depends primarily on the outlook for profitable operation of the ships. In view of rising operating costs with little prospect of overall increase in traffic and the substantially higher cost of new ships the outlook for profitability is not very bright. Hence means must be found through the efforts of the industry and labor and Government action to make operations as profitable as possible. Such means are discussed at a later point in this study.

Other alternative measures which would tend to encourage private industry to participate in an orderly ship construction program over the next 20 years, although discussed in more detail at another point, should be mentioned here. Forward construction may be stimulated by authorizing a shipowner to accelerate depreciation on a ship built within the next 8 years, and allowing him greater discretion with respect to the accelerated portion of the depreciation depending upon

the age of the vessel replaced. Nonsubsidized operators may be encouraged to construct new ships as well as to set aside funds for that purpose by deferring taxes on earnings deposited in a construction reserve fund. The tax deferred earnings would be limited to the cost to them of ships built within the next 8½ years. Funds so deposited would be required to be committed for new ship construction by December 31, 1964. Authorizing the Government to acquire tankers which are at least 10 years old under the trade-in allowance provision of the 1936 act would not only provide a national defense reserve of tanker ships and encourage construction but would as well improve the quality of the active fleet. Extending the authority of the Government to insure ships' mortgages from 90 percent to 100 percent of their value would probably make such mortgages more attractive.

On the administrative side, the establishment of a revolving fund out of proceeds from the sale of ship mortgages, sale, and charter of ships and appropriations for construction of new ships and payment of construction subsidy would facilitate the granting of Government aid in financing new ship construction. Finally, Congress should be requested to appropriate funds to cover the Government's share of the cost of construction and participation in the financing, if necessary, of ships to be constructed under title V for which applications are now pending before the Board.

2. Operating-differential subsidy

(*a*) *Description.*—The Merchant Marine Act, 1936, authorizes the Federal Maritime Board to consider the applications of citizens of the United States for financial aid in the operation of a vessel on an essential United States foreign-trade route. No such application may be approved by the Board unless it finds that—

(1) The operation of vessels in the service, route, or line is required to meet foreign-flag competition and to promote the foreign commerce of the United States and that the vessels were built in the United States;

(2) The applicant owns or can and will build or purchase vessels of the size, type, speed, and number and with the proper equipment required to enable him to operate and maintain the service, route, or line in such manner as may be necessary to meet competitive conditions and to promote foreign commerce;

(3) The applicant possesses the ability, experience, financial resources, and other qualifications necessary to enable him to conduct the proposed operations of the vessels as to meet competition and promote foreign commerce; and

(4) The granting of the aid is necessary to place the proposed operation of the vessels on a parity with those of foreign competitors and is reasonably calculated to carry out effectively the purposes and policy of the act.

Upon approval of the applications, the Board may enter into long-term contracts with applicants not to exceed 20 years in which it will agree to pay no more than the excess of the fair and reasonable cost of insurance, maintenance, repairs not covered by insurance, wages and subsistence of officers and crew, and other items of expense in which the Board finds the applicant is at a substantial disadvantage in competition with vessels of a foreign country.

Operating-differentials represent the percentages by which the costs of operating a United States-flag vessel with a United States crew

exceed the equivalent costs of operating the same vessel with a foreign crew by the foreign competitor under the registries of the competitive foreign countries.

An American operator receiving operating subsidy aid must agree to—

(1) the recapture of profits in excess of 10 percent of capital necessarily employed to the extent of subsidy paid to him;

(2) the establishment of reserve funds to provide for (a) replacement and acquisition of ships, (b) prompt payment of his obligations to the United States, (c) continued maintenance and operation of subsidized vessels; and

(3) the use of articles, materials, and supplies produced in the United States, and the repair of subsidized vessels within the continental limits of the United States.

Operating-differential contracts stipulate the minimum and maximum number of voyages to be made by the subsidized operators in each of the designated services covered by the contract. All sailings are made on the basis of sailing schedules (including vessels, dates, ports of call, and other particulars as required) approved by the Maritime Administration. Sailings in excess of the maximum number specified can be made only with the prior approval of the Maritime Administration and no subsidy is paid for such voyages. Failure of an operator to make a voyage is not deemed a breach of the operator's obligations under the contract if the cause of such failure is an act of God, force majeure, accident, strikes or other labor disturbances, war insurrections, weather conditions, loss or damage of vessels, or any other cause not within control of the operator, with the understanding that the cause of any interruption insofar as it may be under the operator's control shall be remedied by the operator with all reasonable dispatch and performance resumed at the earliest practicable time.

(*b*) *Results of the program.*—(1) Number of subsidized operators: The first operating-differential subsidy became effective on July 1, 1937, and by January 1, 1941, contracts had been entered into with 12 operators. As World War II had eliminated virtually all foreign-flag competition, nine of these operators agreed as of July 1, 1941, to the elimination of all subsidy payments on all the subsidizable items except wages and payments on wages were reduced by about 75 percent. In 1942, when practically all United States-flag ships had been requisitioned, all operating subsidy payments were suspended until January 1, 1947, when they were renewed for 10 operators. On January 1, 1948, contracts for the remaining two operators became effective. Since that date 5 additional operators have been approved for operating-differential subsidies so that 17 United States-flag operators are now eligible to receive operating-differential subsidy aid.

(2) Subsidizable voyages: The operating-differential subsidy contracts now in effect provide for a minimum of 1,413 and a maximum of 1,754 sailings on a calendar-year basis. Actual voyages based on the voyage limitation for the fiscal year 1953 were 1,359. Voyages by operators now under subsidy for the fiscal year 1954 are estimated at 1,568 and 1,587 in fiscal year 1955.

For the fiscal year 1951, Congress limited the number of vessels that could be placed under subsidy with the funds appropriated that year. While the vessel limitation did not prove particularly burdensome, the Maritime Administration suggested the next year that the limitation be converted to a voyage limitation with the thought that a voyage limitation would provide greater flexibility. The appropriation for the fiscal year 1952, as passed by Congress, imposed a limitation of 1,522 voyages, 307 of which were to be reserved for contractors who had no operating-differential subsidy contract in July 1951.[30] This limitation created a difficult problem in administration since the contracts then outstanding provided for a maximum of 1,480 and a minimum of 1,164 voyages. The Maritime Administration estimated 1,340 voyages would be required to cover the essential services, or 176 above the minimum provided by the contracts. With only 51 voyages available the Administration allocated them to the various companies in proportion to needs reduced by the ratio of 51 to 176. Subsequently, Congress amended the appropriation[31] by fixing the maximum number of voyages at 1,400, of which 60 were reserved for new operators.

(3) Determination of subsidy rates: Operating-differential-subsidy payments are determined and stated as percentages of the subsidizable expenses of a United States operator. Separate rates are determined for each type of such expense for each type of vessel on each trade route which takes into consideration each principal foreign-flag competitor. The process of calculating these rates is complex and requires a large amount of foreign-cost information which must be maintained on a current basis. The information must be obtained largely from foreign-flag operators who are competitors of each subsidized United States-flag operator. Since many foreign-flag operators are not willing to divulge their costs which are to be used as a basis for determining subsidy payments to their subsidized United States-flag competitors, the Maritime Administration has been compelled to obtain the information elsewhere and as a consequence has been compelled to base at least part of its calculations upon assumptions.

In view of the complex nature of the problem, and the large number of calculations that must be made, the Federal Maritime Board and/or the Maritime Administration has made good progress in determining the amount of the subsidies which are due United States-flag operators. Except for certain items of insurance and the amounts involving a few combination- and passenger-type vessels, it has completed all the work through the calendar year 1951. Given below is a short history of the subsidy rate determinations in connection with currently effective agreements.

Subsidy rates are required in accordance with the provisions contained in operating-differential-subsidy agreements. Though many of these agreements were effective for the year beginning with January

[30] Public Law 137, 82d Cong., 1st sess., August 31, 1951.
[31] Public Law 375, 82d Cong., 2d sess., June 5, 1952.

1, 1947, the majority of these agreements were not executed until 1950 and 1951, as indicated in the tabulation shown below:

Operator	Effective date of agreement	Date executed
American Export Lines, Inc.	Jan. 1, 1948	June 6, 1951
American Mail Line, Ltd.	Jan. 1, 1947	June 1, 1947
American President Lines, Ltd.	do	Oct. 5, 1951
Farrell Lines, Inc.	do	Jan. 5, 1950
Grace Line, Inc.	do	Dec. 29, 1949
Lykes Bros. Steamship Co., Inc.	do	Do.
Mississippi Shipping Co., Inc.	do	Apr. 5, 1950
Moore-McCormack Lines, Inc.	do	Mar. 8, 1951
New York & Cuba Mail Steamship Co.	Jan. 1, 1948	Aug. 16, 1951
Oceanic Steamship Co.	Jan. 1, 1947	Sept. 28, 1951
Pacific-Argentine-Brazil Line, Inc.	Jan. 26, 1949	Oct. 9, 1951
Seas Shipping Co., Inc.	Jan. 1, 1947	June 6, 1950
United States Lines Co.	Jan. 1, 1948	May 1, 1950
United States Lines Co. (*America*)	Aug. 2, 1948	Jan. 13, 1950

Before the execution of these agreements the Maritime Administration and former Maritime Commission were able to have the subsidized operators waive certain categories of subsidy for the earlier years 1947 and 1948. The estimated amount of subsidy savings to the Government as a result of these negotiations is difficult to compute. Savings in administrative time and expense were also realized. Suffice it to say, such negotiation avoided the necessity for the calculation of approximately 245 subsidy rates.

Rates required, after the above negotiations, for the years 1947 through 1951 (the calculation of which for the most part was commenced in the fall of 1951), are shown in the following tabulation:

Items	Rates required	Completed and acted on by Federal Maritime Board and/or former Commission as of Mar. 25, 1954	Completed and in process to Federal Maritime Board	To be completed as of Mar. 25, 1954
Wages	264	255	6	3
Subsistence	218	197	12	9
Maintenance and repair	131	122	5	4
Stores	127	102	17	8
Insurance	254	54	66	134
Total	994	730	106	158

The General Accounting Office, in their audit of the former Maritime Commission's accounts, took exception to the methods and procedures used in the calculation of subsidy rates. Subsequently, the Maritime Administration, in cooperation with the General Accounting Office and representatives of the subsidized lines, established a Manual of General Procedures which was adopted by the Board September 26, 1951. It was only after the approval of this manual, which had the concurrence of all concerned, that the go-ahead signal was given for the calculation or recalculation of all subsidy rates. From the above table, it can be seen that the backlog of rates exists only in the insurance category. Though the manual of September 26, 1951, had some general provisions for calculating rates for insurance, it was not until May 1953 that an effective procedure was approved by the Board, for

emphasis was placed on the calculation of rates for the wages category which today constitutes 82 percent of the total subsidy for an operator.

With the exception of insurance, the rates remaining to be completed through the calendar year 1951 are for the passenger ships *America*, *LaGuardia*, *Independence*, *Constitution*, and the good neighbor fleet. Approximately 15 rates for the year 1952 have been completed and are now in process to the Board. It is anticipated that the insurance backlog will be nearly overcome by June 30, 1954. A substantial portion of these insurance rates covering the backlog years have been completed and processed in the past 3 months, as indicated by the above table.

Attention is also called to the fact that a subsequent revision of the procedure to provide for a rate calculation on the basis of a "predominant" type vessel effected considerable savings in time and administrative costs. Beginning January 1, 1950, under the revised procedure, a rate was computed to apply to "all" cargo-type vessels on a line or service for each particular operator. To show the comparison through such a change, one need only to look at the rates required for the period 1947 through 1951 for wages and subsistence.

Year	Number of rates	
	Wages	Subsistence
1947	51	12
1948	75	68
1949	57	57
1950	41	41
1951	40	40
Total	264	218

The use of a single "rate" for the three basic vessel types (cargo, combination, and passenger) was already in effect in the other categories of subsidy.

(4) Current status of subsidy payments: The estimated amount of subsidy due but unpaid to subsidized operators (total subsidy accruals to December 31, 1952, less payments to June 30, 1953), amounts to $78 million. This unpaid subsidy results from a combination of several factors.

Subsidy payments are made as follows:

(a) An initial advance is made of 75 percent of the subsidy accrued, provided it does not exceed 90 percent of subsidy payable (subsidy accrual less recapture). The rates applied are tentative pending final determination.

(b) After an audit of the subsidizable voyage costs has been made by the Maritime Administration the operator is allowed up to 90 percent of the total subsidy accrual (provided it does not exceed 90 percent of the total accrual less recapture).

(c) The final 10 percent is paid after an annual accounting has been made and clearance of final subsidy rates for the particular year involved.

As a result of the holdback provision stated above in (*a*) and the fact that some of the operators have not claimed beyond 75 percent because final rates have not been established in some cost categories,

it is estimated that the Government owes approximately $47 million. Lack of final rates for 1952 contributes to this large amount.

No rates have been approved for subsidizable insurance costs and no subsidy has been paid for this category of cost. The amount due for this item is estimated at $14 million.

Rates have not been established for certain categories of subsidizable costs on certain special type ships, including the passenger liners, steamship *America*, steamship *United States*, good neighbor ships, and certain combination-type ships. Moreover, it is probable that certain final rates may exceed tentative rates used as a basis for initial subsidy payments. The amount of subsidy owed by the Government for these two factors is estimated at $17 million.

(*c*) *Trend of subsidy aid.*—Under the operating-differential subsidy provisions, the number of subsidized voyages has increased from 1,010 in 1948 to 1,469 in 1953 with 1,455 estimated during 1954 for operators who held operating-differential subsidy contracts as of July 1, 1952. Over the same period the estimated subsidy payable has increased from $17,665,000 to $61,584,000 in 1953. Including payments for prior years, the 1955 budget includes a request for $85 million for operating-differential subsidy. (Appendix table 17.)

On July 1, 1952, there were 13 subsidized operators, and subsequent to that time 3 additional operators were permitted to operate under subsidy. There is now pending an application by 1 operator who has not previously been under subsidy, and 5 applications pending for new or additional services by operators who are now subsidized, and in addition 1 such application has been approved.

While operating subsidy aid has been a vital factor in maintaining a nucleus of acceptable vessel types on essential trade routes, the increase in required Government aid has been substantial. The overall national interest demands that essential shipping be provided, yet the fiscal limitations of the Government require that some reasonable limit on the amount of subsidy be imposed.

There are numerous factors which affect the amount of subsidy which the Government must provide to qualified operators. Chief among these are the level of operating costs, number of operators permitted to receive subsidy, number of subsidized sailings, amount of traffic available, and level of passenger fares and cargo rates.

The level of operating costs, of course, depends upon the prices operators must pay for materials, supplies, and other such items, wage rates, and the efficiency with which the various operations are performed. The first two, generally speaking, are beyond the control of any individual operator, but the third, that of efficiency of operation, is controlled essentially by the individual operator and the success or failure to achieve maximum efficiency can be attributed to the management skill of the operator.

Preliminary study of operating costs indicate wide variations in the results achieved by various subsidized operators. For example, in 1952 the percentage of overtime cost to basic wages on cargo vessels for subsidized operators, on a trade-route basis, varied from a low of 32 percent to a high of 63 percent (see appendix table 18). Further study should be undertaken to determine the reason for such wide variations and all possible measures taken to eliminate any unnecessary overtime cost. Another example of extreme variation in cost is found in the overhead category. A study of the overhead expense

of a selected group of subsidized operators indicates that as a percentage of voyage revenues, overhead expense varies from a low of 6.4 percent to a high of 13.5 percent (see appendix table 19). In addition there were extreme variations among the various items of overhead expenses.

Inefficiency in operation, to the extent that it affects the level of operating costs and decreases operating profits, increases the cost of subsidy to the Government. Efficiency operations, therefore, are of vital importance to both the operator and the Government.

As already indicated, the number of operators granted subsidy aid is increasing. As new operators receive Government aid, and as additional services are permitted under subsidy for operators already receiving Government aid in the operation of vessels, the overall cost of subsidy will increase. The determination of essential trade routes and the amount of services required thereon, therefore, becomes very important. On the basis of past experience, a recent study indicates that a limitation in the number of subsidized voyages to the minimum specified in operating-differential subsidy contracts, would reduce the overall amount of subsidy by about 8 percent (see appendix table 20).

The Maritime Administration is engaged in a review of essential trade routes to determine the current essentiality of the various routes and amount and kind of service required on such routes as are deemed essential. It is imperative that this work be completed, particularly as to the service requirements, so that the number of operators eligible for subsidy and the overall amount of subsidy obligation of the Government can be subject to some control. Piecemeal determinations of route requirements alone are unsatisfactory and do not permit proper coordination between Government expenditure for operating subsidy and national requirements.

The amount of cargo available to subsidized American-flag vessels is an important factor in the ultimate amount of subsidy payable by the Government. Equipment utilization, as in any industry of high capital cost, is an important factor in the profitability of the overall operation. Rate cutting, cargo preferences, and discriminatory practices by foreign countries, and competition by Government-operated vessels are all important sources of cargo losses to subsidized liner operations. Maritime policy proposals relating to the international trade problem, such as those recommended by the Randall Commission, can have a profound effect on the revenue position of American-flag vessels and the amount of expenditure for subsidy aid imposed on the Government. In view of the national-defense requirement for an operating fleet, the Government will be compelled to provide a merchant fleet if private industry is prevented from doing so because of lack of cargo. Consequently, if private industry is to provide a merchant fleet adequate for national requirements, all Government assistance in providing cargo and protection against unfair foreign competition should be provided.

Operators not subject to conference rates frequently charge rates below the conference level. To the extent that cargo is taken from subsidized vessels as a result of uneconomic rate cutting, and to the extent that such competition results in lower levels of rates generally, the amount of Government aid will increase. All possible measures to assure compensatory rates, or as nearly compensatory as possible, should be encouraged by the Government in the interest of maintaining a privately owned merchant marine at minimum public expenditure.

(*d*) *Future requirements of subsidy aid.*—The granting of operating subsidy is vital to the problem of facilitating the continued maintenance of a United States merchant marine adequate in size and quality for national security and the commercial needs of the Nation. Without adequate earnings, steamship operators would not be willing, nor could they long continue to provide services, reinvest earnings, or seek new capital. Under the American business system it is not reasonable to expect borrowed or equity capital to flow into an industry which is unable to show reasonable prospects of profitability. Because United States operators compete in the world market under a substantial cost disadvantage, the Government provides an operating subsidy designed to reduce that disadvantage.

Ships operated under the operating-differential subsidy provisions of the 1936 act comprise a large and important segment of the active fleet which is so necessary for national security. The net operating subsidy received by the operators of these ships has amounted to more than half of their net income (after taxes) in the postwar period. Without such assistance, the industry's earning power would have been substantially reduced. Since January 1, 1952, 4 new operating subsidy contracts have been approved and there are now pending before the Federal Maritime Board applications for operating subsidy filed by 6 operators involving a minimum of 117 voyages. Rising operating costs coupled with additional subsidized services forecast that increasing reliance will be placed on the operating subsidy by the liner service operators to support their earnings.

To achieve a building program of 60 ships a year, it will be necessary not only for the operators to reinvest their capital in ships, but to induce them to replace some of their ships prior to the expiration of the ship's normal economic life. Moreover, the ships acquired in replacement will be far more costly to the operators and require the provision of additional capital. Earnings which may be adequate now may be wholly inadequate to induce operators to acquire the more expensive ships, particularly ahead of schedule.

To illustrate this problem, appendix table 21 shows for the year 1952 the relationship of the depreciation allowances on subsidized cargo ships to net income before depreciation allowance but including gross subsidy accruals and before taxes, compared with the depreciation allowance on replacements for those ships, based on the estimated cost of such ships. The allowance for depreciation in the subsidized cargo ships for the 13 operators receiving subsidy amounted to $15,455,889 in 1952, or 14.3 percent of profit before depreciation and taxes, but after gross subsidy accrual. This compares with an estimated allowance for depreciation on the ships required in replacement of these vessels of $55,950,250, or 51.9 percent of 1952 profit. Including passenger-carrying ships in this statement would further increase the percentage of replacement depreciation to profits. It is clear that operators of subsidized ships will have to produce substantially higher earnings in order to maintain their 1952 rate of profit and cover the depreciation charges of new vessel replacements.

Under the anticipated circumstances of ship replacement and reliance on operating subsidy, curtailing the amount of such subsidy does not appear to be a solution to the problem. Reducing future operating subsidies would in most instances simply reduce the operators profitability. If earnings are reduced below that which would provide the

impetus for retention or investment of additional private capital, the ship-construction program required to keep a nucleus shipbuilding industry of adequate size active would not be forthcoming from construction for private account. Reducing the amount of subsidy by limiting the scope of service offers no solution because all ships currently active are required for national defense. It is not likely ships now subsidized could operate long without subsidy under the United States flag. There is ever present the danger that American shipping capital will seek investment in foreign-flag ships. The 1936 act subsidy provisions were designed to overcome this threat.

There are two possibilities that offer some hope for reducing the amount of operating subsidy: First, to the extent that operating efficiency can be improved and reflected in earnings it may replace Government assistance; second, an increase in the utilization of ships' carrying capacity, particularly on inbound voyages, will produce higher earnings. The Government should encourage and insist that the shipping industry, including shipping labor, employ every conceivable method of improving efficiency. Consistent with other national objectives, the Government should take all steps to stimulate our foreign trade.

(*e*) *Possible alternative solutions.*—The ability of the United States to achieve a merchant fleet required for the national defense and the development of its foreign and domestic commerce is dependent in large part upon the assistance and the protection of the Government made available to private industry. However, this assistance should be only as large as is needed to accomplish the desired results; constant attention should be given to ways and means of reducing the necessary aid to minimum levels.

Operating subsidy payments have increased sharply in recent years as already indicated. For 1955, both accruals and payments are estimated at even higher levels. This situation demands a careful scrutiny of operating costs, both subsidized and nonsubsidized items.

No one group is responsible solely for solving the problem of high ship-operating costs. The problem concerns not only the Government which is interested in the development and the maintenance of a national merchant fleet of adequate size and quality at the lowest possible subsidy cost, but also ship operators and labor unions. The economic system of the United States is founded upon individual initiative and individual enterprise and the responsibility for economical and efficient operation is thereby placed upon capital and labor. Government intervention and assistance are necessary because of the wide difference between foreign and domestic costs, but it must be maintained at a minimum level. Individual enterprise is basically responsible for the development of a sound, economical, and efficient merchant fleet.

(1) Reduction in operating costs: Several suggestions have been made which are designed to lower the operating-differential subsidy cost without impairing the size and quality of the subsidized fleet. These are as follows:

(a) Operators should place greater emphasis on policies and practices which would improve the efficiency and economy of their operations. In this connection the use of incentives and rewards should be carefully considered.

(b) The Maritime Administration should place greater emphasis upon its administration of section 606 (6) of the Merchant Marine Act, 1936, as amended which requires "the contractor [to] conduct his operations with respect to the vessel's services, routes, and lines covered by his contract in the most economical manner, but with due regard to the wage conditions prescribed by the Commission as provided in title III."

In this connection the Maritime Administration has recently formed a Subsidy Operations Survey Review Committee in which is centralized the function of reviewing the results of operation studies made by field examiners and submitting appropriate recommendations.

(c) Ship operators should be required to report in detail at regular time intervals the measures they have adopted during each interval leading toward greater economy and efficiency and the results of those measures. These measures should be made available to all subsidized operators.

(d) Comparative ship operating wage and subsistence cost data of subsidized lines should be submitted to the various labor unions which should be requested to submit recommendations to the Maritime Administration leading to an improvement of efficiency and economy without impairment of take-home basic wages.

In addition to the above suggestions, both the subsidized operators and the Maritime Administration should cooperate in studies leading to improved vessel utilization. Such studies, of course, cannot be based strictly upon vessel capacity and traffic availability, but must recognize the need for sailing schedules to meet competitive conditions and to provide adequate service.

(2) Possible subsidy limitations: The possibility of reducing the profit rate to which a subsidized operator is entitled before the Government begins to recapture operating-differential subsidy payments also has been suggested. According to the act of 1936, if the net profit of the contractor on his subsidized vessels and services incident thereto at the end of a 10-year period during which an operating-differential subsidy has been paid has averaged more than 10 percent per year upon the contractor's capital investment necessarily employed, the contractor shall repay the Government an amount equal to one-half of such profits in excess of 10 percent per annum as reimbursement for operating-differential subsidy payments received by the contractor up to an amount equal to the amount of the operating subsidy payments during the 10-year period. Consequently, recapture does not now take place until the contractor's profits exceed 10 percent after taxes. The extent to which operators' profits might be reduced without impairing their ability to meet their contractual obligations to the Government would require careful study. At any rate, their profits after subsidy should not exceed those being earned by industry generally.

Another suggestion would limit the subsidy to the difference in labor cost between United States and foreign-flag vessel operations. In view of the difficulties in the determination of subsidy rates other than the rates established for labor cost, and the fact that labor costs alone account for approximately 83 percent of total subsidy payable (see appendix, table 20, for details of calculation and exact figure), this suggestion seems to have some merit, at least from the adminis-

trative point of view. A savings of about 17 percent in subsidy payable would result and the work required for the calculation of numerous subsidy rates would be avoided. If, in addition, the number of subsidizable voyages was limited to minimums specified in the operating-differential subsidy contract, an overall saving of about 23 percent in subsidy payable is estimated.

The last two suggestions are simply methods of reducing the rate of profit to subsidized operators after subsidy. Any such plans should be given careful study as to their possible effect on the amount of service provided and the ability of operators to replace their fleets in accordance with the national requirement.

3. Tax benefits

(*a*) *Capital reserve fund.*—The American operator receiving operating-differential subsidy aid is required to make certain deposits in a capital reserve fund. These deposits are (1) amounts equal to the depreciation (on a 20-year life basis or longer period under certain circumstances) if earned on all ships receiving operating subsidy; (2) the proceeds of insurance and indemnities received on account of total loss of any ship receiving operating subsidy aid and the proceeds from the sale or other disposition of any such ship; (3) the percentage of any net profits of the subsidized operations if the cumulative net profits are in excess of 10 percent per annum from the date of the operating subsidy contract that the Secretary of Commerce determines is necessary for the purchase replacement or reconstruction of ships; and (4) interest earned on securities and cash balances in the capital reserve fund, and on securities in the special reserve fund. The operator with the Board's approval may make voluntary deposits in the capital reserve fund of any earnings otherwise available for distribution to stockholders.

The operator, in addition to being in breach of his operating subsidy contract, would also lose the tax benefits on the moneys deposited, if the funds are used for any purpose other than the purchase of replacement ships, the reconstruction of ships, or additional ships to be used on an essential foreign trade route, or for the liquidation of the indebtedness covered notes secured by a mortgage on a subsidized ship. The Board may give the operator temporary permission to transfer from the capital reserve fund sums not needed to meet mortgage obligations, to the operator's general funds, if the operator's general funds have become seriously depleted by reason of operating losses on ships receiving operating subsidy aid and the funds in the operator's special reserve fund have become exhausted. If such a transfer is permitted by the Board, the operator is required to repay such transferred sums to the capital reserve fund as soon as the operator's financial condition permits such repayment.

Under the provisions of section 607 (h) of the 1936 act, the moneys deposited by the operator in the capital reserve fund were made "exempt from all taxes." This statutory tax exemption has been modified by an agreement between the Treasury Department and the operators receiving operating subsidy aid, dated July 21, 1947. The extent of this modification will be discussed after consideration of the special reserve fund of a subsidized operator.

(*b*) *Special reserve fund.*—The operator receiving an operating-differential subsidy is required to deposit annually his profits (without regard to capital gains and losses) earned in the subsidized operations

in excess of 10 percent, after taxes, of the operator's capital necessarily employed. The profits available for deposit in the special reserve fund would be reduced by the amount, if any, of his profits required to be deposited in the capital reserve fund. Interest earned on the cash balances in the special reserve fund are required to be deposited in that fund. The operator, with the Board's approval, may make voluntary deposits in the special reserve fund of any earnings otherwise available for distribution to stockholders.

Under the authority of the 1936 act, the operator may make the following disbursements from the special reserve fund: (1) reimbursement of the contractor's general funds for losses incurred in the operation of subsidized vessels and services; (2) payments due the United States for recapture of operating-differential subsidies, provided that the fund is not reduced below 5 percent of capital necessarily employed; and (3) transfer, with the Board's approval, to the operator's capital reserve fund.

The operator, with approval of the Board, after his recapture obligations are satisfied, may withdraw amounts from the special reserve fund and pay the amounts in his general funds provided that the special reserve fund cannot be reduced below 5 percent of his capital necessarily employed.

Pursuant to the provisions of section 607 (h) of the 1936 act, the earnings of a subsidized operator deposited in the special reserve fund, and in the capital reserve fund are exempted "from all Federal taxes."

During World War II, operating subsidy payments were suspended. By a closing agreement between the Treasury Department and the subsidized operators, dated July 21, 1947, the provisions of section 607 (h) as applicable to those operators, were modified by the following agreements:

> (1) For the years 1943 to 1946, inclusive, when no subsidies were being paid, deposited earnings are taxable in the year in which earned.
>
> (2) Subsequent to January 1, 1947, earnings from subsidized and nonsubsidized operations, as well as capital gains, are treated, to the extent deposited in reserve funds, as "tax deferred." The term "tax deferment" as used in the closing agreements means: (*a*) that earnings deposited are not taxed in the year of deposit, (*b*) that such nontaxed earnings when used in the acquisition of vessels are not included in the tax basis of vessels either for purpose of tax depreciation or for determining gain or loss, and are not included in invested capital, and (*c*) that if amounts are withdrawn from the reserve funds and are paid into the contractor's general funds or distributed as dividends or bonuses, the earnings withdrawn are taxable as if earned in the year of such withdrawal.
>
> (3) Earnings from both subsidized and nonsubsidized vessels through December 31, 1942, and capital gains on the disposal of vessels through December 31, 1946, to the extent deposited in the reserve funds, are treated as "tax exempt."

This means that such earnings and gains are includible in the tax basis of the vessel acquired therewith and are included in invested capital. If such amounts are withdrawn from the reserve funds and paid into the contractor's general funds or distributed as dividends or bonuses, the amounts so withdrawn are taxable in the year of withdrawal.

(4) Interest and other amounts earned on balances in the reserve funds have the same tax status as the funds on which they were earned.

(5) Any balances in the reserve funds reverting to the operator on the termination of his last subsidy contract, whether considered as "tax exempt" or "tax deferred," are taxable in the year of termination of the contract.

(*c*) *Construction reserve fund.*—An American operator in foreign or domestic commerce of the United States is authorized under section 511 of the 1936 act to establish a construction reserve fund. In the fund the operator may deposit (1) proceeds from the sale of ships; (2) indemnities for the loss of any ship; (3) earnings derived from the operation of ships documented under the laws of the United States, and services incident thereto; and (4) interest or other earnings upon amounts previously deposited.

As to the deposit of proceeds from the sale of a ship, or proceeds from insurance of a lost ship, the operator may elect, in his Federal income tax returns to treat the gain on such sale or insurance recovery as not recognized, and gain will not be subject to the Federal capital-gains tax. The untaxed gain must be excluded from the cost of the ship acquired or improved by the deposited funds for the purpose of ship depreciation in later years so that the amount receiving relief from the capital-gains tax will later be taxed at income and excess-profits-tax rates. As to the deposit of earnings derived from the operation of ships and service incidental thereto, and the interest or earnings upon amounts deposited, no tax benefits are afforded other than the exemptions from the provisions of section 102 of the Internal Revenue Code (relating to unreasonable accumulation of funds).

In order to secure the tax benefits on the proceeds of the sale of ships or insurance on lost ships, the moneys so deposited must be used within a specified time for the acquisition of a new ship, in the reconstruction or reconditioning of a ship, or in the liquidation of the indebtedness covered by purchase money mortgage on a ship.

If the moneys deposited in the construction fund are not used for the purpose listed above, within the prescribed time limit, or if they are withdrawn for other purposes, the amount of the untaxed gain is taxable as of the year in which realized with interest computed from the date of non-compliance or withdrawal from the construction funds. Additionally, the Treasury Department may also reconsider the financial position of the taxpayer to determine whether there was an unreasonable accumulation of funds within the meaning of section 102 of the Internal Revenue Code.

(*a*) *Voluntary deposits.*—Under the provisions of the Merchant Marine Act, 1936, as amended, an operator holding an operating-differential subsidy contract with the approval of the Maritime Administrator may make voluntary deposits in the capital or special reserve funds of any earnings otherwise available for distribution to stockholders. The Maritime Administration has adopted a policy covering the approval of such voluntary deposits. The policy is designed to authorize the accumulation of funds by an operator in anticipation of ship replacements which he will be required to make. Under the policy an annual review of shipbuilding costs, amount of construction subsidy and funds available for replacement is made. In estimating the funds available the following procedure is used.

To the current capital reserve fund balance is added: (1) depreciation to be funded during the remaining life of the ship, plus, (2) estimated amount to be earned during the period on securities and the cash balance in the capital reserve fund, plus (3) 2.5 percent of the estimated reproduction cost of the ships presently owned, plus (4) the amount by which working capital in excess of a current ratio of 2 to 1 plus the balance in the special reserve fund (minus subsidy recapture and the 5 percent statutory retention amount) exceeds an amount equal to the aggregate of the average single voyage expenses of operating and maintaining ships on a subsidized operator's fleet.

From this total there is deducted the outstanding mortgage indebtedness on the operator's subsidized ships. Approval of a voluntary deposit is granted if it is found that 35 percent of the estimated replacement cost exceeds the funds determined to be available for replacement.

(*e*) *Accelerated amortization.*—Under the provision of section 124 (a) of the Internal Revenue Code (sec. 216 of the Revenue Act of 1950), a certificate of necessity may be issued authorizing the holder thereof to depreciate over a period of 60 months that portion of the cost of facilities certified as essential in the interest of national defense.

Certificates have been granted in connection with the proposed construction of 31 tankers, 28 ore carriers, and 7 other craft. The construction cost of these ships was estimated by those who applied for the certificates at $401,970,700. The certificates granted are for varying percentages of the total cost, and if all of the ships were constructed and the owner used the amortization allowed under the certificates, the depreciation would amount to $223,445,920, or $181,007,136 in excess of the normal depreciation which normally would be allowed during the 60-month period. Construction has been either completed or begun on only 22 tankers and 4 small vessels. Certificates have lapsed for most of the other vessels.

(*f*) *Results of tax benefits program.*—The Treasury Department in its supplemental report on the scope and effect of tax benefits provided the maritime industry, estimated total savings of income and excess profits tax realized by subsidized operators for the period 1938–51 at $155.6 million.

There is no question that the tax benefits provided the subsidized operators has increased the ability of those operators to replace, improve, and expand their fleets.

A grant total of $640 million has been deposited in the capital and special reserve funds, of which $388 million has been withdrawn for use in connection with the acquisition of ships.

(*g*) *Requirements in the future.*—It has been indicated elsewhere in this report that the subsidized operators within the next 10 years will have to replace a substantial part of their ships, and on the basis of present-day cost of replacements and estimates of fund availability it is doubtful that all will have sufficient funds available for the purpose of replacement.

The continuation of the tax benefit provisions of the 1936 act is important because of their relationship to the ability of the subsidized operators to replace their present fleet as they become due for replacement. It is believed that the subsidized operators would be reluctant to replace any of their ships in advance if such benefits were removed. This, of course, would have a material effect on the 60-ships-a-year building program.

(*h*) *Possible extension of tax benefit aid.*—As indicated by the Secretary of the Treasury in his report to the President, dated March 8, 1951 (H. Doc. No. 213, 82d Cong., 1st sess.):

"Section 511 is of dubious tax value at the present time, and very little use apparently is being made of it by shipping companies. Because of the fact that the tax basis of the replacement vessel is reduced by the capital gain realized, and depreciation allowance for income-tax purposes is accordingly reduced, operators can more advantageously pay the preferential capital-gains tax at current rates under section 117 of the Internal Revenue Code and receive the full benefits of depreciation at the higher income and excess-profits tax rates."

It has been suggested that the nonsubsidized operators be authorized to deposit earnings from the operation of ships and services incident thereto in the construction reserve fund on a tax deferred basis. During the next 5 or 6 years when only few of the ships in the present fleet are due for replacement there will be considerable difficulty in getting American shipping companies to invest funds in new vessels. Consideration should be given to authorizing deposits of earnings in construction reserve funds on a tax deferred basis. The amount of such deposits should be limited to the estimated cost to the operator of his shipbuilding program. Deposits to the full amount of the cost of new ships to the operator would be authorized over the next 7½ years. Provision should be made that in case the new ship is not constructed, taxes would be paid on the amounts deposited at the rates in effect at the time of deposit with interest on such taxes from the date of deposit.

While the accelerated amortization provisions of section 124 (a) of the Internal Revenue Code are available to American-ship operators they have not been too effective in encouraging the construction of vessels. The changes in the provisions of the tax law dealing with depreciation which have been suggested by the President and which are under consideration by the Congress, authorizing industry to take depreciation in excess of that presently allowed, should encourage the construction of a number of ships. However, consideration might well be given to providing a fixed rate for depreciation on all vessels of a certain speed and size, and in addition, allow the owner to take at his election an additional amount each year on vessels which are constructed during the next 8 years.

The above suggestions are presented as possible ways to encourage the shipping industry to invest private capital in new construction during the next 7 to 8 years when few vessels will reach the end of their economic life, but during the period when it is essential that we have a shipbuilding program if we are to maintain the shipbuilding mobilization nucleus required for national security.

4. Mortgage aid

Mortgage aid, that is Government financing of the cost of construction of a ship, is authorized by the 1936 act. In case the ship is built with construction subsidy aid the Government can finance 75 percent of the cost of the ship to the purchaser. In case no construction subsidy is granted the act authorizes the Government to build a ship and sell it to an applicant at a price corresponding to its construction cost (less the cost of national-defense features). In case the ship is designed

to be of not less than 3,500 gross tons and to be capable of not less than 14 knots the purchaser is required to pay not less than 12.5 percent of the sales price of the ship in cash; in the case of other ships not less than 25 percent of the sales price.

The balance of the purchase price of the ship (whether construction subsidy aid is allowed or not) is secured by a preferred mortgage, and is payable in not more than 20 years with interest at 3.5 percent.

Under the provisions of the 1936 act, the Government has financed the construction of 118 ships (constructed without construction subsidy aid), 71 tankers, 31 dry-cargo ships, and 16 lake ore carriers.

5. Mortgage insurance aid

In addition to the financing of the construction of vessels the Maritime Administration under title XI of the Merchant Marine Act, 1936, is authorized to grant mortgage insurance in financing the purchase of ships for use in the foreign and domestic commerce of the United States and ships for use in the fishing trades, on the Great Lakes, bays, sounds, harbors or inland lakes of the United States.

An application for mortgage insurance aid may be made by a proposed mortgagee (a bank or other lending institution) and must be supported by an applicant-mortgagor and prospective operator of the ship. The Maritime Administration must find the proposed project to be economically sound in order to approve it.

If the application is approved the Maritime Administration may insure 90 percent of the unpaid principal of loans and advances made to finance the construction, reconstruction or reconditioning of vessels.

The loan or mortgage insured may not exceed 75 percent of the cost, as estimated by the Administration, of construction or reconstruction and in no event exceed 75 percent of the amount which the Administration estimates would be the value of the vessel when the construction, reconstruction or reconditioning is completed. The period of the insured loan or mortgage is limited to 20 years. The annual interest charge may not exceed 5 percent (6 percent in special situations) and must be found to be substantially less than the going interest rates generally charged for uninsured ship-construction loans or ship mortgages of similar character and in the same area. The Administration collects a premium for such insurance which must be not less than an amount equivalent to one-half of 1 percent per annum or more than 1 percent of the principal obligation of the mortgage or loan outstanding.

Since the enactment of the 1936 act, 12 contracts of mortgage insurance, covering financing in the amount of $5,902,000 have been entered into under the mortgage insurance provisions of the act.

The mortgage insurance provisions of the act are designed to encourage the use of private capital in the financing of ship construction. Since the enactment of the 1936 act, however, as indicated above, little use has been made of the mortgage insurance provisions of the act and by far the greater part of ship construction has been financed by the Government.

Amendments to the mortgage-insurance provisions enacted in 1953 were designed to remove certain of the shortcomings which then existed. First, the amendments extended the coverage of provisions to all vessels engaged in the foreign trade of the United States. Cov-

erage of vessels engaged in the foreign trade had previously been limited to those engaged in the nearby foreign trade. Second, in the event of a default in the payment of principal or interest the lender may now tender an assignment of the mortgage and other collateral and he will receive payment of the insured portion of the unpaid balance of the loan in cash. The lender previously was required to undertake foreclosure and as settlement to accept debentures in lieu of cash. Third, the 1953 amendments authorized insurance for short-term loans to finance ship construction during the period of their construction whereas before these amendments the Government could insure only a mortgage.

The amendments, however, limited the amount of insurance to 90 percent of the loan or mortgage, thus leaving the private lender with a 10 percent share of the risk. Prior to the amendment the Government could insure the entire amount of the mortgage which could not exceed 75 percent of the cost, and in no event more than 75 percent of the value of the vessel as estimated by the Administration.

While insufficient time has elapsed since the passage of the 1953 amendments to determine whether they will materially reduce Government financing of vessels by encouraging private financing of ships, suggestions have already been advanced that changes should be made. These suggestions advanced so far recommend that the insurance covering the full amount of the loan be authorized and that the requirement that the interest rate be found to be substantially less than the going interest rates be deleted.

If Government financing requirements are to be materially reduced it is believed that the above changes should be made. In addition it is doubtful that an operator who could receive Government financing up to 87.5 percent in the case of certain vessels constructed without construction-subsidy aid would use private financing when only 75 percent is available. Additionally, in the case of certain passenger vessels, the liability of the owner is limited to the vessel itself. It appears doubtful that private financing would be sought under which his liability would not be limited to the passenger ship itself. Legislative changes designed to meet the above points should be enacted.

6. Trade-in allowances

Under the provisions of section 510 of the 1936 act the Maritime Administration is authorized to aid citizens in the construction of new ships by accepting from such citizens as part payment of the cost of a new ship, ships of not less than 1,350 gross tons and 12 years of age (17 years of age after June 30, 1958). The allowance granted on a ship traded in is the fair and reasonable value of the ship, as determined by the Administration. In arriving at the value the Administration shall consider: (1) The value of the vessel for operation in world trade; (2) the depreciation value based on 20-year life; and (3) the scrap value of the vessel. The trade-in price is not paid to the owner of the vessel but is applied as a credit upon the price of a new ship.

Under this section, 134 vessels have been traded in on the construction of 128 new ships; 26 old ships were traded in on the construction of 52 new dry-cargo ships; 72 old tankers against the construction of 60 new tankers; and 36 old lakers against the construction of 16 new lakers.

It is essential that a replacement program be immediately undertaken in an effort to (*a*) upgrade the present active fleet; (*b*) provide employment of a shipyard nucleus required for mobilization purposes; and (*c*) if possible, upgrade the reserve fleet by placing in the reserve fleet, ships of a type, such as tankers, which are not presently in the fleet. Steps should be taken to induce the present owners of tankers to trade them in and construct new tankers.

7. United States cargo preference provisions

The principal legislative assistance to American-flag shipping under the general heading of foreign aid and mutual defense provisions are: (1) The act of 1904; (2) Public Resolution 17 (73 Cong.); and (3) the 50–50 cargo-preference provisions of foreign-aid legislation.

(*a*) *Act of April 28, 1904.*—This act provides that vessels of United States registry or vessels belonging to the United States shall be employed exclusively in the direct overseas support of the United States Military Establishment. Exceptions to this legislation may be made only in cases where the President finds that freight rates are excessive or unreasonable or suitable vessels of American ownership or registry are not available. The legislative objective and justification for the act of 1904 is obvious. Direct military support of the United States Military Establishment in overseas areas should not be subject to the hazards which would naturally attend the use of foreign-flag vessels. Such vessels, under certain political and trade conditions, at the moment of greatest necessity, either might not be available to the United States for charter or purchase, or might be made available only under terms and conditions which would be entirely unsatisfactory to the effective support of the Military Establishment. Merchant shipping is a definite part of any military organization.

This law, which has been on the statute books for nearly 50 years, has operated satisfactorily and is consistent with the practice and policies of other nations which maintain extensive overseas military establishments. Where suitable vessels of American registry are not available, vessels of foreign registry have been used to a minor extent. An example of this situation arose in the Korean war, when certain heavy-lift ships of foreign registry were chartered by the Military Sea Transportation Service in the absence of suitable United States-flag vessels.

An idea of the magnitude of the military operation and of its importance in providing a firm backlog for United States-flag shipping, whether on United States public vessels or United States-flag vessels under charter to the Military Sea Transportation Service, may be gathered from the following liftings by the Military Sea Transportation Service, both inbound and outbound, for the calendar year 1952: Passengers, including troops, 2,579,969; dry-cargo (measurement tons) 27,707,295; petroleum products (barrels), 125,610,030.

(*b*) *Public Resolution 17.*—This resolution, approved by the President on March 26, 1934, states that the intent of the Congress in any loans made by the Reconstruction Finance Corporation or other instrumentality of the Government is to foster the export of agricultural or other products and that provision shall be made that such products shall be carried exclusively in vessels of the United States unless the Shipping Board Bureau (Maritime Administration) after investigation shall certify to the lending agency that vessels of

the United States are not available in sufficient numbers, or in sufficient tonnage capacity, or on necessary sailing schedules, or at reasonable rates.

Under date of June 5, 1934, the Attorney General ruled that Public Resolution 17, while not obligatory, is a rule of guidance expressing the policy of the United States which should be followed by the lending agency when feasible, and that the lending agency should obtain advice from the Shipping Board (Maritime Administration). This interpretation has been useful in providing for the sharing of traffic with foreign ships.

Upon the termination of hostilities in 1945 there was some objection, both at home and abroad, to the application of Public Resolution 17 on a 100 percent United States-flag basis to exports financed by loans to foreign countries then in prospect, when involving countries possessing merchant marines of their own. It was then agreed between the former Maritime Commission and the Export-Import Bank that the Attorney General's ruling provided grounds whereby the Maritime Commission could recommend in the public interest the sharing of the traffic between vessels of the United States and of the recipient nation. This agreement became the basis for reserving at least half of the traffic for United States vessels in line with the general intepretation of section 101 of the Merchant Marine Act of 1936, and for granting participation to vessels of the borrowing nation by administrative decision when deemed advisable.

At the present time, the Export-Import Bank of Washington is the principal agency whose loans for exports are involved in the application of Public Resolution 17. The sharing of traffic with foreign vessels is arranged under so-called waivers when (1) United States registered vessels are not available as provided in the resolution itself and authority is given to route traffic by vessels of the recipient nation or of other nations, and (2) it is not feasible to require total United States-flag carriage and it is deemed to be in the interest of the merchant marine to permit participation of vessels of the recipient nation under so-called general waivers. In this latter category, other flag vessels may also be authorized to participate when United States-flag or recipient-flag vessels are not available.

Under existing world conditions, proper application and administration of Public Resolution 17 will undoubtedly serve as a protection against an amelioration of the effects of foreign governmental or quasi-governmental control and routing of the imports from the United States which are financed by United States governmental agencies. This does not mean that the joint resolution should or will be administered arbitrarily or used as a weapon of economic aggression. It is believed that the resolution is being administered in a manner which carries out the intent of the Congress that American steamship companies shall not be injured by the removal of cargo from the field of free competition as might be the case where the cargo is originated by loans asked by foreign government or quasi-government foreign agencies and which are financed by funds supplied by agencies of the United States Government.

Discussions with the Export-Import Bank have indicated that the dollar disbursements by the bank during the 8 fiscal years ended June 30, 1953, amounted to some $4,150 million. It is further estimated that in general, the overall flag distribution of the traffic

generated by Export-Import Bank loans was approximately two-thirds to vessels of American registry and one-third to vessels of foreign registry. It must be realized, however, that foreign-flag tonnage in the immediate postwar period was not available in adequate quantities and therefore United States-flag vessels probably received a higher share of the cargo then they would have carried if foreign-flag vessels had been available in adequate numbers. At the present time Public Resolution 17 assures vessels of United States registry of a substantially higher proportion of the cargo financed through Export-Import Bank loans than would be the case if such cargo were routed by the foreign governments and quasi-government agencies who are recipients of the loans.

(c) *The 50–50 cargo preference provisions of foreign-aid legislation.*—(1) Discretion: Aid cargoes, in the generally accepted meaning of the term, arise under the authority of the following legislation: (*a*) Economic Cooperation Act of 1948 and (*b*) the Mutual Defense Assistance Act of 1949. Section 111 (a) (2) of the 1948 act, as amended, states, in effect, that at least 50 percent of the gross tonnage of the cargo shipped from United States ports shall move in vessels of American registry. It further states that such commodities shall be assessed separately, as carried by the three classifications of oceangoing tonnage—dry-cargo liners, bulk-cargo vessels, and tankers. On April 3, 1949, this act was amended to state that United States-flag vessels shall be utilized to the extent of 50 percent "if available at market rate, for United States-flag vessels." The Mutual Defense Assistance Act of 1949 is administered under the same general provisions as those applicable to the Economic Cooperation Assistance Act of 1948, as amended.

(2) Importance to United States shipping: The importance to the American merchant marine of these aid cargoes during the period 1948 through 1952 is apparent from the following figures which present in millions of long tons shipments from United States to all destinations between April 2, 1948, and December 31, 1952, which were financed by the Foreign Operations Administration (formerly Mutual Security Agency and Economic Cooperation Agency):

	Total	Bulk cargo	Liner cargo	Tanker
Total	74.2	46.0	22.6	5.6
United States-flag	41.4	26.6	12.9	1.8
Foreign-flag	32.8	19.4	9.7	3.8

During the calendar years 1951 and 1952 the tonnage moved under the authority of the military defense aid program amounted to 4,681,218 measurement tons of which approximately 70 percent, or about 3 million tons, were shipped in vessels of United States registry.

(3) Appraisal of the policy: The United States policy of requiring the shipment in American vessels of at least 50 percent of particular noncommercial cargo movements is directed to shipments from the United States which have been paid for by the United States in the form of loans, grants, or other types of assistance. This cargo is not considered to be commercial cargo within the accepted meaning of that term. It is not considered a normal movement of cargo, but a move-

ment arising from abnormal economic and military conditions existing throughout the world. The 50-percent rule does not apply to shipments between foreign countries which are financed by United States aid programs. The movement of cargo not originating in the United States has constituted a very considerable portion of the total program and the greater part of it has been carried by foreign-flag vessels.

It should be further pointed out that the policy of reserving not less than 50 percent of the aid cargoes, while important to United States-flag vessels in the postwar period, has little long-term significance. A basic purpose of the financial aid given foreign countries is to enable them to increase their productivity and thereby reduce their trade imbalance. Such an objective presupposes that the aid program will be temporary and will diminish as commercial cargoes are increased. There is reason to expect that a decreasing rather than an increasing part of the world's commerce will be connected with United States Government financing. Furthermore, if overall worldwide commercial movements hold their own or increase, the statutory proportion of aid cargo reserved to United States-flag vessels will diminish. At present, the amount of United States foreign-aid cargoes has decreased to such an extent that many United States-flag vessels are now laid up or are in the process of being laid up.

There has been criticism of the so-called 50–50 provisions of the Foreign Operations Administration and military defense aid program acts on the grounds that the cost of transportation would be less were the material furnished under the above programs handled entirely by foreign-flag recipients of the aid, to the extent that they were able to carry the cargo. As in all generalizations, this statement must receive serious qualification. Without going into detail, it may be pointed out that liner rates are generally determined by conferences in which foreign-flag operators are much more numerous than United States-flag operators and therefore traffic carried by vessels operated by all conference members are carried at rates which are the same regardless of their flag of registry. The above figures show that roughly 30 percent of the total United States dry-cargo traffic financed by the Foreign Operations Administration fell within the liner category. Insofar as tramps are concerned, it should be pointed out that there was a considerable period in the postwar era when the market rates for foreign-flag tramps exceeded or were equal to those charged by United States-flag tramps and to this extent there would have been no saving by shipping the traffic in foreign-flag vessels. Moreover, during a considerable portion of the post-World War II era foreign-flag vessels were not adequate to transport the traffic which was to be moved—a condition which existed as recently as 1951 and 1952 when hundreds of United States-flag vessels were withdrawn from the reserve fleet. Had there been little or no United States-flag participation, whether by privately owned United States-flag tramp vessels or vessels furnished by the United States Government from its reserve fleet, it follows that the freight offerings in relation to the relatively inflexible number of foreign-flag tramp vessels would have driven the rates demanded by the latter to very much higher levels. It appears then, that the various factors and circumstances which go to set ocean rates for tramp tonnage are both numerous and interlocking, and it is nearly impossible to state, with any degree of accuracy, what the rate situation would have been had certain factors been added or eliminated in relation to what actually took place.

It should be stressed again that the United States has granted huge amounts of aid only because abnormal world conditions have raised problems which are not susceptible of solution through normal commercial processes. This aid is not intended to be of a permanent nature, and is designed to be available only so long as world economic and military conditions necessitate. Accordingly, carryings under the 50–50 cargo-preference provisions contained in the various United States foreign-aid statutes will be reduced in the extent that normal world economic and military conditions are restored.

It should be further pointed out that our national policy with respect to transportation of a certain portion of aid cargoes in American-flag vessels has a long, nonpartisan history of congressional support. Accordingly, when Congress has enacted aid laws and made appropriations for their implementation, it has taken into consideration the existence of the so-called 50–50 cargo-preference provisions.

VI. Conclusions and Recommendations

A. CONCLUSIONS

1. Our basic national maritime policy is sound. Indeed, its objectives are so fundamental to the national interest that their attainment should be given primary consideration at all times.

2. Present world conditions require the development and implementation of a program that will assure the fulfillment of our national maritime policy.

3. Experience in two world wars and the Korean conflict demonstrated that the United States must depend upon its own merchant fleet and shipbuilding and repair industries for ocean transportation.

4. National defense, on the basis of current planning, requires an active merchant fleet in peacetime of about the size of that in operation on December 31, 1952.

5. A review of present traffic available for United States-flag ships and of anticipated trends indicates that United States commercial needs probably will not require the employment of an active merchant fleet larger than that privately operated on December 31, 1952.

6. A construction program of 60 oceangoing ships a year would maintain the American shipbuilding industry at sufficient strength to provide a nucleus of shipyard manpower capable of expansion to meet estimated mobilization requirements. This program over a period of years would eliminate the block obsolescence problem, enhance the commercial and national defense strength of the active fleet, and improve the quality of the reserve fleet, provided that the better type active vessels were acquired by the Government for the reserve fleet on a trade-in basis. However, if annual deliveries of oceangoing ships drop below 30 ships per annum, shipyard employment will drop below the 1953 levels and there will be a corresponding resultant deactivation of facilities.

7. The critical period in the attainment of the required shipbuilding program is the next 10 years because very few vessels will reach retirement age in that period. Present aids are insufficient to induce private operators to replace a substantial number of ships in the next 10 years.

8. The replacement of the ships in the active fleet as of December 31, 1952, as they become 20 years old will be beyond the capacity of

existing United States shipyards and the financial resources of American shipowners since about 80 percent of that fleet will be due for replacement within the 3-year period 1963 through 1965.

9. Construction-differential subsidy aid will not of itself induce the construction of many new ships for operation in the foreign trade in the absence of a reasonable outlook for profitable operations.

10. Unless American-flag vessels can be operated profitably many owners will seek to transfer them to foreign registry so as to take advantage of lower operating costs.

11. Operating costs, especially seagoing wage costs, are so much higher for United States-flag ships than for foreign-flag ships that it is becoming increasingly difficult for American ships, particularly those in the nonsubsidized fleet, to compete in foreign trade. This problem has become more acute with the increase in foreign-flag competition and the reduction in the amount of cargo preference traffic.

12. The parity concept is sound in principle and should be continued as the basis for the determination of operating and construction-differential subsidy. Efforts to overcome the difficulties inherent in its administration should be continued.

13. The cost to the Government of providing operating subsidy to eligible merchant ships has increased. In the interest of maximum utilization and conservation of public funds, it is essential that all vessels receiving subsidy aid be operated as efficiently and economically as possible. Management, labor, and Government must share the responsibility in achieving maximum efficiency in ship operation.

14. Since World War II, tramp operators have received considerable assistance from cargo-preference legislation, but because this form of aid is declining some alternative form of assistance may be necessary to maintain in operation the number of tramp ships required for national defense. On the basis of experience, world market rates for tramp ships are not expected to be high enough to cover the cost of operating such vessels under the United States flag.

15. The cargo-preference provisions of existing law should be continued in effect as a part of our national maritime policy.

16. Discriminatory practices on the part of certain foreign governments materially affect the competitive position of the United States merchant ships operating in certain foreign trade areas. All reasonable measures should be taken to remove such discriminatory practices.

17. The reserve fleet is nearly adequate in numbers of dry-cargo and passenger-carrying vessels but critically deficient in tankers. It consists largely of slow emergency-type ships of limited usefulness built during World War II. The tanker shortage should be overcome and the reserve fleet upgraded with replaced vessels from the active fleet as soon as possible. Recent research and developmental programs looking to improving the speed and cargo handling ability of slow emergency-type laid-up cargo ships should be accelerated.

18. The essential trade route concept is sound and has contributed to the economic stability of the liner segment of our merchant fleet in the foreign trades. However, constant scrutiny of all trades should be given in order to assure that the granting of subsidy aid is in keeping with the traffic needs of each essential route.

19. Only moderate improvement in the national-defense potential of the domestic fleet can be expected under present circumstances.

While bulk traffic continues to increase in the continental United States coastwise trades, the transportation of package freight and passengers has declined substantially from pre-World War II levels. So far no improvements have been instituted which show possibilities of revitalizing the package freight and passenger services.

B. RECOMMENDATIONS

1. Requiring legislative action

(*a*) *Appropriations for pending applications for construction-differential subsidy.*—The Department of Commerce should request appropriations to cover the Government's share of the cost of construction of ships for which construction-differential subsidy applications are pending. New ship construction should be financed privately to the greatest extent possible. However, if Government financing is required requested appropriations should exclude the purchaser's downpayment.

(*b*) *Sale of Government ship mortgages.*—The Department of Commerce should request authorization to sell Government ship mortgages to provide funds for ship construction. The sale price for such mortgages should not be less than the mortgage indebtedness existing at the time of sale, and in addition such mortgages should be guaranteed by the Government.

(*c*) *Construction revolving fund.*—The revolving fund authorized under section 206 of the Merchant Marine Act, 1936, as amended, should be made available for use in connection with ship construction, conversion, betterments, research and development. There should be authorized for deposit in this fund (1) appropriations for ship construction; (2) receipts from sale of ship mortgages; (3) interest and principal payments on ship mortgages owned by the Government; and (4) sale and charter receipts. Reports on the activities with respect to the source and application of such funds should be made periodically to Congress.

(*d*) *Procedure for the determination of construction subsidy.*—The Department of Commerce should request legislation to facilitate the determination of construction-differential subsidy rates. Provisions required are: (1) The Board should be authorized to determine construction-differential subsidy rates for major types of vessels, i. e., cargo, combination, and tanker, to be effective for a certain period of time; (2) language in existing law that has given rise to controversy should be clarified; and (3) the Comptroller General should be required to audit the construction subsidy rate as determined by the Federal Maritime Board within a period of 30 days.

(*e*) *Accelerated depreciation for new vessels.*—The Department of Commerce should request legislation to provide that any vessel contracted for after July 1, 1954, and delivered prior to January 1, 1962, may be depreciated on a 20 year basis. In addition, the owner should be authorized to take additional depreciation on a sliding scale basis as follows: (1) An amount not to exceed 3 percent each year if the ship is delivered before January 1, 1962; and (2) if in connection with such construction a vessel of less than 20 years is traded in pursuant to section 510 of the act, an additional one-half of 1 percent per year depreciation should be allowed for each year the vessel is less than 20 years old. Such depreciation should

be used in the year taken to reduce the unpaid balance of any mortgage outstanding against the vessel and subsidized operators should be required to deposit such depreciation in their statutory reserve fund.

(*f*) *Deposits in construction reserve fund.*—The Department of Commerce should request legislation authorizing nonsubsidized operators, including those in the domestic trades, during the period July 1, 1954, to December 31, 1961, to deposit in a construction reserve fund earnings from shipping operations and services incident thereto on a tax-deferred basis. The amount of such deposits should be limited to their share of the estimated costs of ships to be contracted for and delivered during the period July 1, 1954, to January 1, 1962. Unless amounts so deposited are used to construct ships that are completed prior to December 31, 1964, they should be taxed as if not deposited with interest on the tax to run from the date said tax would have been payable. Interest and earnings on amounts deposited in the fund should also be deposited in the fund.

(*g*) *Trade in-and-build tanker program.*—The Department of Commerce should urge enactment of legislation dealing with the trade-in-and-build tanker program similar to that sponsored by the Department during the first session of the 83d Congress. This legislation authorized the Maritime Administration to acquire tankers which are at least 10 years old under the terms of section 510 of the Merchant Marine Act, 1936, as amended, for the purposes of creating a national defense reserve of tanker vessels and of encouraging the construction of modern tankers in United States shipyards. Under Section 510, the Government is authorized to acquire an old vessel and grant an allowance against the purchase price of a new vessel. Consideration should be given to the use of a statutory formula for establishing trade-in values in lieu of the present method of section 510 of the 1936 act.

(*h*) *Aid to tramps.*—The Department of Commerce should request legislation authorizing the Secretary of Commerce upon certification of national defense necessity by the Secretary of Defense to grant operating subsidy aid on a basis not to exceed parity with foreign competitors to ships engaged in tramp operations. Such aid should be subject to the development of an administratively feasible program and be granted only if: (1) The operator replaces or agrees to replace existing tramp ships in a manner which will assist the achievement of the construction program required for national defense; and (2) the other segments of the United States-flag fleet would not be adversely affected.

(*i*) *Mortgage insurance—title XI.*—The Department of Commerce should request amendments to title XI (ship mortgage insurance of the Merchant Marine Act, 1936, as amended) as follows:

(1) Authorize Government insurance on a private mortgage or loan of 87½ percent of the cost of a ship in cases where the ship could qualify for a Government mortgage or loan of 87½ percent.

(2) Increase the amount of Government insurance from 90 to 100 percent of the amount of the mortgage or loan.

(3) Remove provisions requiring that the interest rate be substantially less than uninsured mortgages.

(4) Authorize mortgage insurance for ship mortgages sold by the Government in accordance with recommendation (*b*) above.

In addition, consideration should be given to limiting the operator's liability to the Government in the event the Government is required to pay the private mortgages under an insured loan.

2. Requiring administrative action

(*a*) *Development of shipbuilding program and formal replacement of vessels.*—Present discussion with American shipowners with respect to the replacement of their ships should be intensified. The primary object of these discussions should be to bring about an orderly shipbuilding program, with emphasis on replacement during the next 10 years. Operators receiving operating-differential subsidy aid should be encouraged to take positive steps to replace their ships in a manner which will tend to eliminate the block obsolescence problem. In short, they should be required to replace a certain portion of their ships earlier than they would under normal conditions so that their entire fleets will not require replacement over a short period of time. Consideration should be given to requiring forward replacement of vessels in connection with the granting of new operating subsidy contracts, extension of existing contracts, extension of subsidy to a ship over 20 years of age, voluntary deposits, or any other change in an operation-differential subsidy contract.

(*b*) *Research and development programs.*—The Government should expand research and development programs looking to (1) increasing the efficiency of ships and related shoreside facilities; and (2) improving defense capabilities of active and laidup ships. Such programs should be coordinated with other governmental agencies having similar or related interest as well as with any activities being carried on by private parties.

(*c*) *Procedures for determination of construction subsidy rates.*—The Federal Maritime Board should formulate procedures for the determination of construction subsidy rates in cooperation with other Government agencies, the shipping and shipbuilding industries, and other interested parties. The Board shall hold a sufficient number of hearings to establish an adequate record upon which to base construction subsidy rates by classes of vessels and at such intervals as in the judgment of the Board are required. Rates having been once determined by the Board shall be audited by the Comptroller General within a 30-day maximum period. Immediately following, the rates as audited and the effective period for such rates shall be published in the Federal Register.

(*d*) *More efficient use of shipboard labor.*—Because the cost of seagoing labor is responsible for most of the operating-differential aid granted to United States-flag vessels, the Maritime Administration should undertake a program to promote the most efficient use of shipboard labor. In addition to the investigations and studies that the Administration may make, it should require subsidized operators to study the problem as it relates to their individual operations, and to report periodically such corrective measures as have been adopted and their effectiveness. The Administration should also enlist the cooperation of nonsubsidized operators and labor unions to bring about increased efficiency of labor and reduction in labor costs.

(*e*) *Efficiency control by Maritime Administration.*—The Maritime Administration should intensify the administration of section 606 (06) of the Merchant Marine Act, 1936, as amended, which requires sub-

sidized operators to conduct their operations in the most economical and efficient manner.

(*f*) *Reserve fleet utilization.*—Since the active commercial fleet fluctuates in size and composition while mobilization requirements for shipping remain relatively constant, there should be maintained within the reserve fleet a sufficient number of ships in ready status to meet estimated deficiencies in the active commercial fleet, resulting from early mobilization requirements. This group of ships should contain the better type of vessels possessing sufficient speed to meet early mobilization requirements. In addition, the other vessels in the reserve fleet should be maintained in such condition as to enable them to meet phased mobilization requirements.

(*g*) *Discrimination affecting United States-flag vessels.*—The problem of overcoming or minimizing the effect of policies and practices of certain foreign countries which discriminate unjustly against nonnational foreign-flag vessels, including those of United States registry, best can be approached on the basis of continued use of diplomatic channels and other measures now employed by the United States Department of State in cooperation with other agencies and departments of the United States Government.

(*h*) *Basis and scope of Government subsidies.*—Studies of the basis, scope, and coverage of direct and indirect subsidies should be continued. In this connection, on April 16, 1954, shortly after the present study was completed, the President requested the Secretary of Commerce to include in subsequent studies a full consideration of the extent to which direct means can be utilized to maintain an adequate merchant marine.

(*i*) *Review of essential trade routes.*—The reviews of essential trade routes should be completed prior to the award of any additional subsidy contracts or the modification of any existing contracts. Procedures for the collection and analyzing of data, and criteria used for determining essentiality should be so established as to simplify the present criteria and permit the completion of the studies within a reasonable period of time. Traffic trends and vessel utilization and performance of United States-flag and foreign-flag ships by trade route, commodity, type of service, and operator should be emphasized.

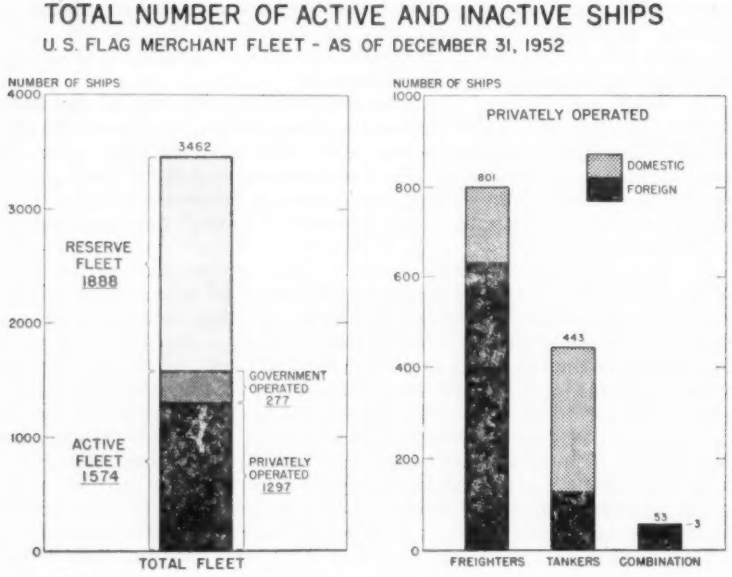
(*j*) *Domestic shipping problem.*—A special study of the domestic water carrier situation is being undertaken by the Department of Commerce and therefore no detailed study of that segment of the United States merchant marine has been included in this report. The ships employed in the domestic trade are most important to national defense since they are more likely to be available immediately in time of emergency than ships which engage primarily in the foreign trade. The deadweight capacity of the dry-cargo fleet has decreased from 3,152,000 tons in 1939 to 1,697,000 tons in 1952.

The dry-cargo segment of the domestic fleet is in a serious condition. Among the possibilities for increasing the size of this portion of the domestic fleet are: (1) Improvement of cargo handling facilities; (2) development of specialized types of carriers; (3) enactment of legislation authorizing the Interstate Commerce Commission to revoke operating certification in case of nonuse; and (4) repeal of those provisions of the Panama Canal Act which prevent certain groups from operating vessels in the coastwise trade.

APPENDIXES

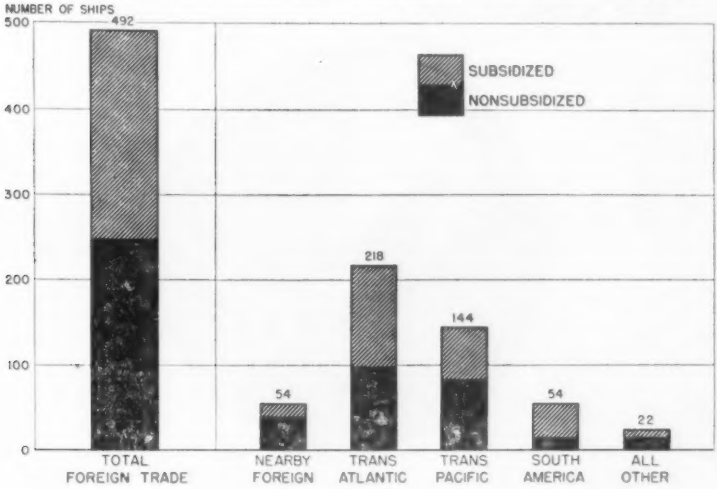
Appendix A

Charts and Tables



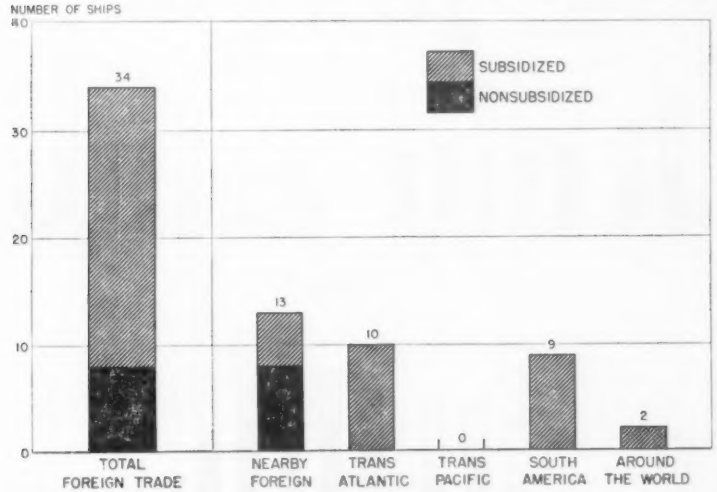
NUMBER OF PRIVATELY OWNED U.S. FLAG OCEAN-GOING FREIGHTERS EMPLOYED IN FOREIGN TRADE

BY SUBSIDIZED AND NONSUBSIDIZED CARRIERS, AS OF DECEMBER 31, 1952



NUMBER OF PRIVATELY OWNED U.S. FLAG OCEAN-GOING COMBINATIONS EMPLOYED IN FOREIGN TRADE

BY SUBSIDIZED AND NONSUBSIDIZED CARRIERS, AS OF DECEMBER 31, 1952



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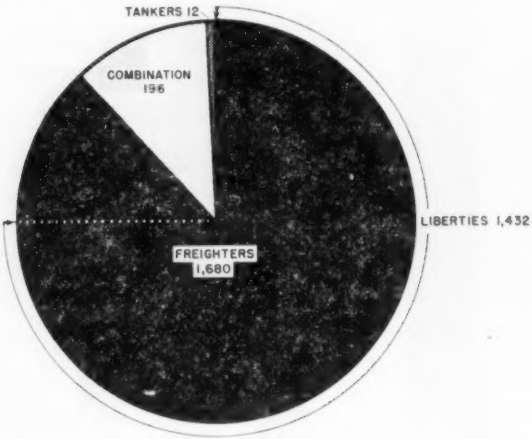
NUMBER OF U.S. FLAG OCEANGOING MERCHANT TYPE SHIPS IN THE MARITIME ADMINISTRATION RESERVE FLEET

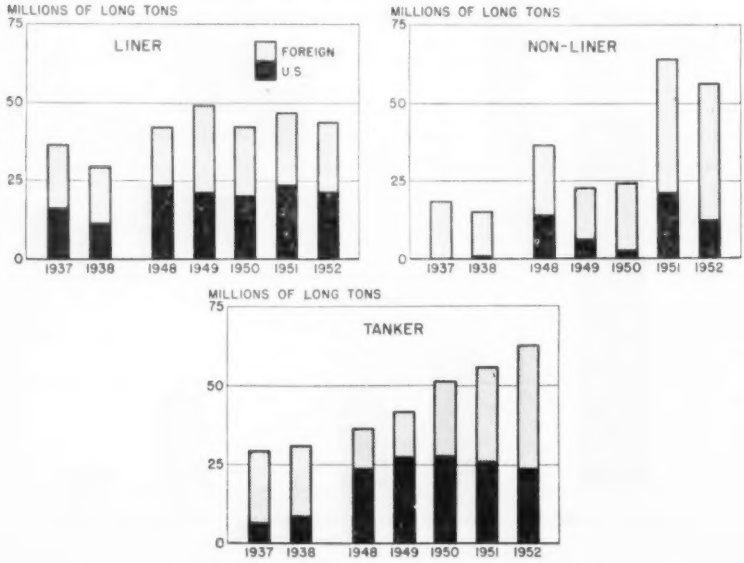
AS OF DECEMBER 31, 1952



TOTAL 1,888

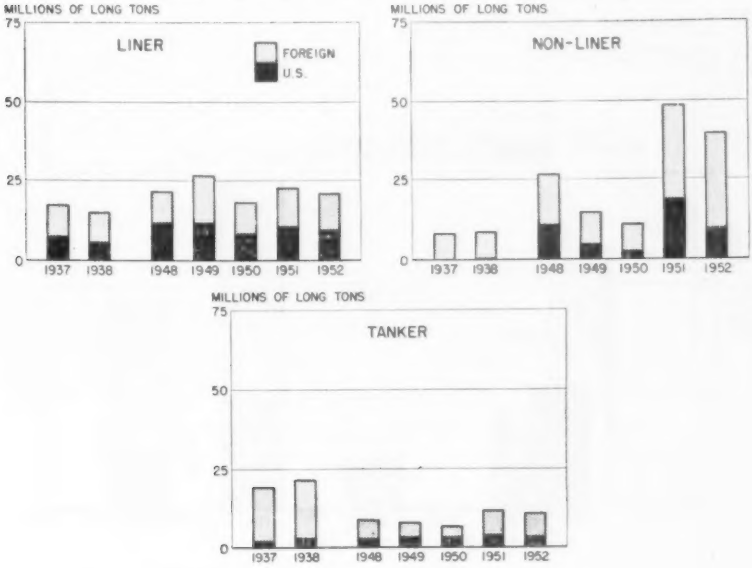
TOTAL TRAFFIC IN THE FOREIGN TRADE

BY U.S. AND FOREIGN FLAG SHIPS, 1937-1938 AND 1948-1952



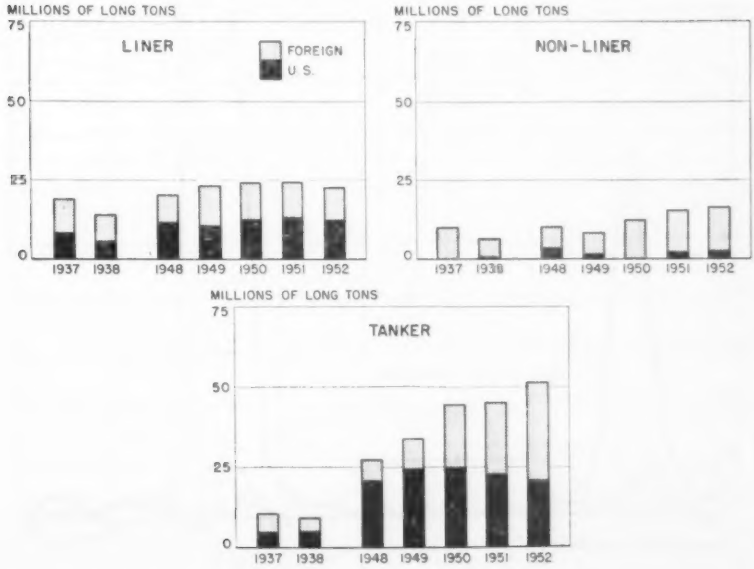
TOTAL EXPORTS IN THE FOREIGN TRADE

BY U.S. AND FOREIGN FLAG SHIPS, 1937-1938 AND 1948-1952



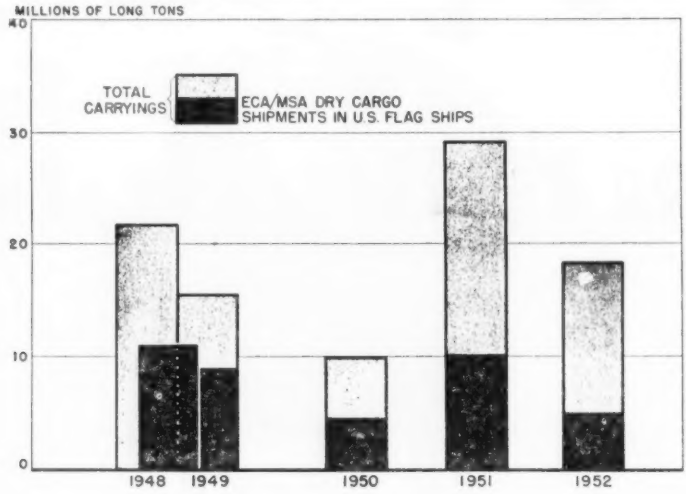
TOTAL IMPORTS IN THE FOREIGN TRADE

BY U.S. AND FOREIGN FLAG SHIPS, 1937-1938 AND 1948-1952

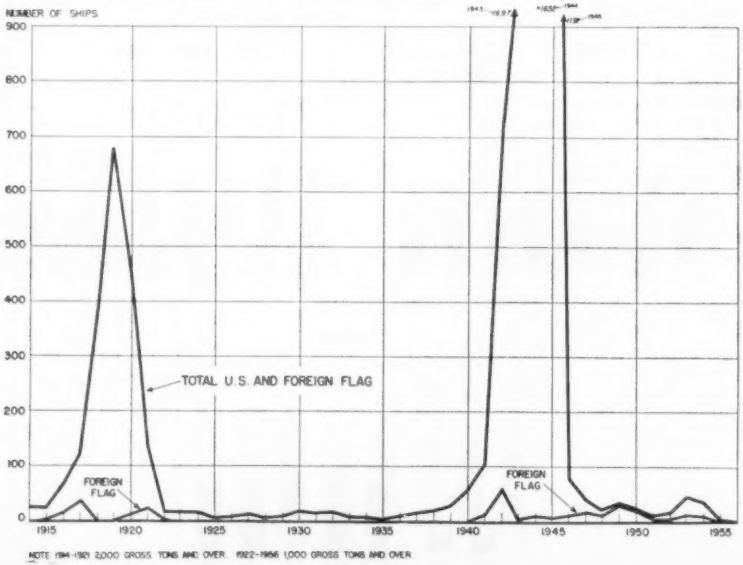


SIGNIFICANCE OF ECA/MSA PROGRAMS TO TOTAL DRY CARGO EXPORTS CARRIED BY U.S. FLAG SHIPS

CALENDAR YEARS 1948-1952



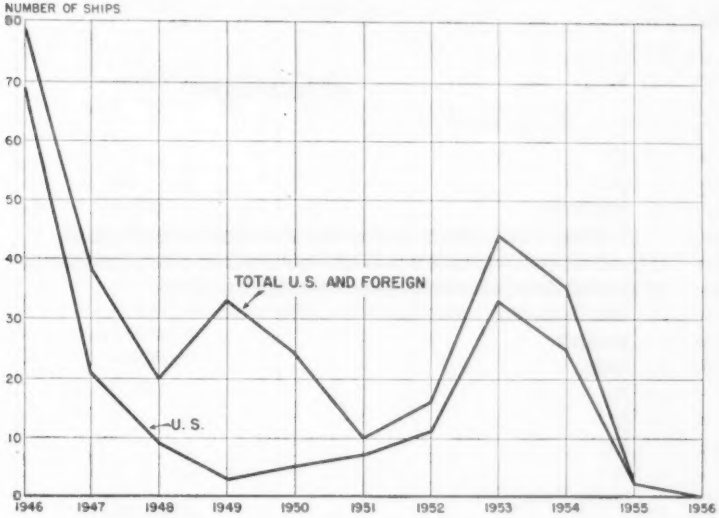
OCEANGOING MERCHANT SHIPS CONSTRUCTED IN U.S. COASTAL SHIPYARDS, 1914–1956



NOTE: 1914-1921 2,000 GROSS TONS AND OVER. 1922-1956 1,000 GROSS TONS AND OVER.

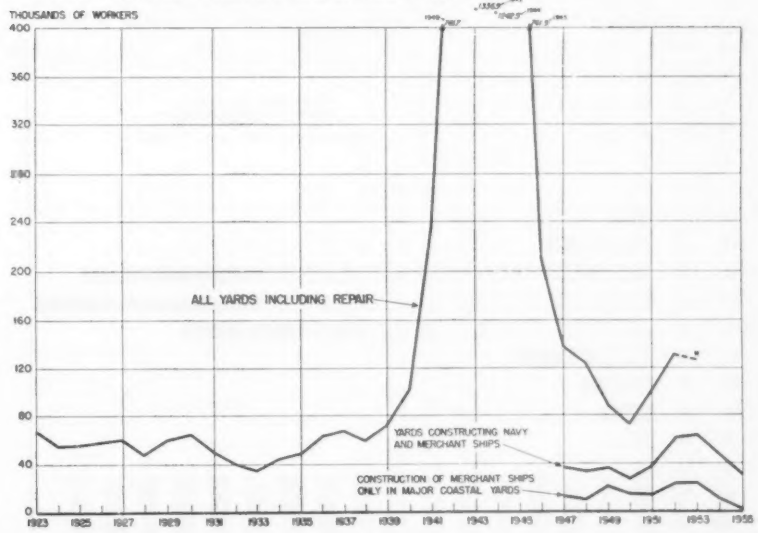
SHIPBUILDING IN U.S. SHIPYARDS SINCE WORLD WAR II

1000 GROSS TONS AND OVER, 1946 - 1956



SHIPBUILDING EMPLOYMENT IN U.S. PRIVATE YARDS

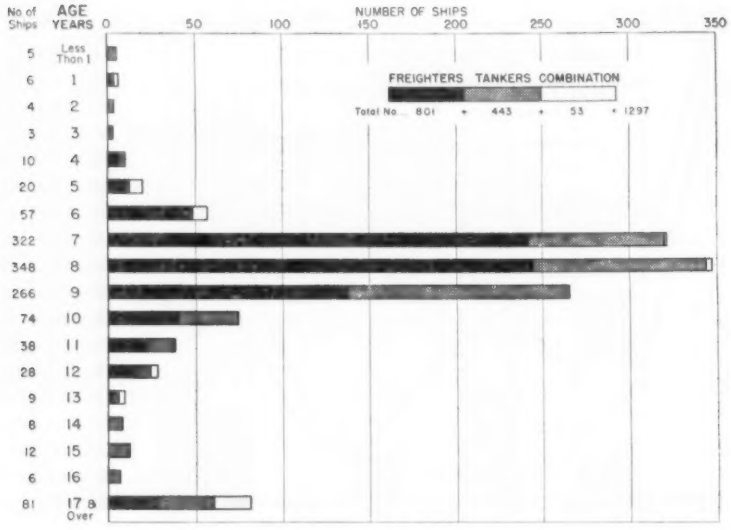
TOTAL DIRECT AND INDIRECT LABOR, 1923 - 1955



* FIRST SIX MONTHS 1953

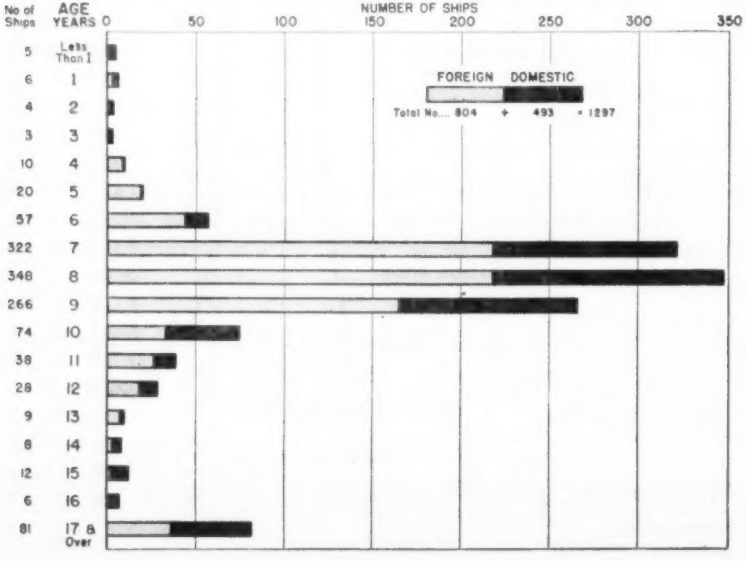
AGE OF PRIVATELY OPERATED ACTIVE FLEET

BY TYPE OF SHIP - AS OF DECEMBER 31, 1952



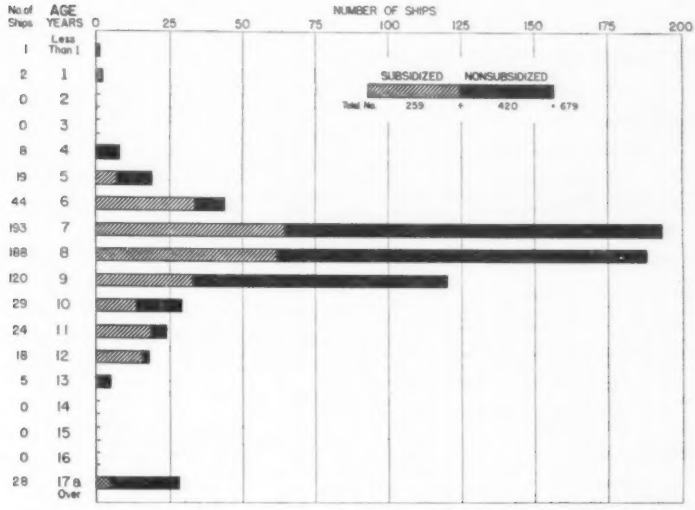
AGE OF PRIVATELY OPERATED ACTIVE FLEET

BY AREA OF EMPLOYMENT AS OF DECEMBER 31, 1952



PRIVATELY OPERATED FREIGHT & COMBINATION SHIPS OPERATING IN THE FOREIGN TRADE

BY SUBSIDIZED AND NONSUBSIDIZED OPERATORS



FLEET REPLACEMENT REQUIREMENT* COMPARED WITH ANNUAL (60 SHIP) SHIPBUILDING PROGRAM

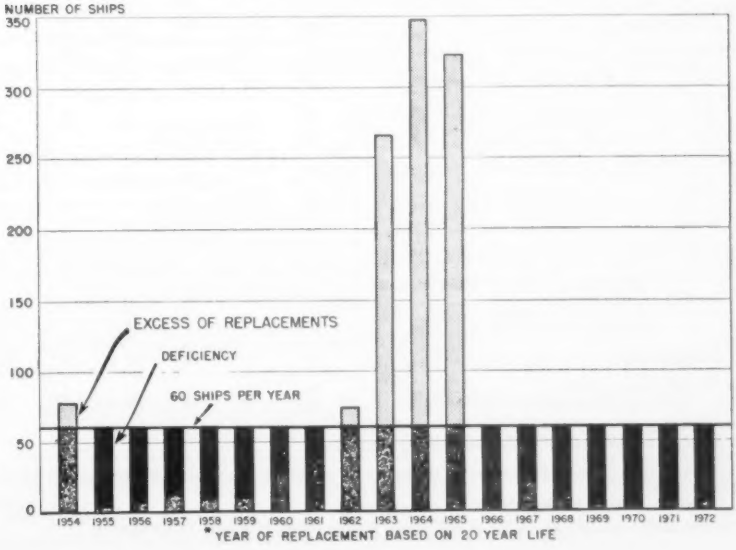


TABLE 1.—*Number of ships available for United States oceangoing transportation requirements, by major types and ownership, 1,000 gross tons and over, as of Dec. 31, 1952*

Status and area of employment	Total all types			Freighters		
	Total	Private	Government	Total	Private	Government
Total (active and inactive)	3,462	1,264	2,198	2,632	776	1,856
A. Active vessels	1,521	1,212	309	927	751	176
1. Operating commercially	1,144	1,112	32	676	651	[1] 25
(a) Total foreign [2]	666	642	24	509	492	[1] 17
Nearby	114	108	6	57	54	3
Overseas	505	487	18	449	435	14
Foreign to foreign	47	47	.....	3	3	.....
(b) Domestic trade	478	470	8	167	159	[1] 8
Coastwise	356	356	.....	62	62	.....
Intercoastal	57	53	4	49	45	4
Noncontiguous	65	61	4	56	52	4
2. U. S. Government operations	377	100	277	251	100	151
Maritime Administration custody (GAA)	108	.....	108	108	.....	108
Department of Defense	169	.....	169	43	.....	43
Privately owned (TC)	100	100	.....	100	100	.....
B. Inactive vessels	1,941	52	1,889	1,705	25	1,680
Temporarily inactive	64	52	[1] 12	36	25	[1] 11
Maritime Administration reserve fleet	[3] 1,877	.....	1,877	1,669	.....	1,669

Status and area of employment	Tankers			Combinations		
	Total	Private	Government	Total	Private	Government
Total (active and inactive)	520	443	77	310	45	265
A. Active vessels	489	424	65	105	37	68
1. Operating commercially	424	424	.....	44	37	7
(a) Total foreign [2]	116	116	.....	41	34	7
Nearby	41	41	.....	16	13	[3] 3
Overseas	31	31	.....	25	21	[1] 4
Foreign to foreign	44	44	.....	.....	.....	.....
(b) Domestic trade	308	308	.....	3	3	.....
Coastwise	294	294	.....	.....	.....	.....
Intercoastal	8	8	.....	.....	.....	.....
Noncontiguous	6	6	.....	3	3	.....
2. U. S. Government operations	65	.....	65	61	.....	61
Maritime Administration custody (GAA)	.....	.....	.....	.....	.....	.....
Department of Defense	65	.....	65	61	.....	61
Privately owned (TC)	.....	.....	.....	.....	.....	.....
B. Inactive vessels	31	19	12	205	8	197
Temporarily inactive	19	19	.....	9	8	[1] 1
Maritime Administration reserve fleet	12	.....	12	196	.....	196

[1] Bareboat to and operated by private shipping companies.
[2] Excludes ships in A 2.
[3] Excludes 11 ships being deactivated for return to fleet and 97 miscellaneous small, damaged, or special purpose ships.
[4] Owned by Panama Canal Company.

Source: Ship Data Branch, Statistics and Special Studies Office, Maritime Administration.

TABLE 2.—*Deadweight tonnage of ships available for United States oceangoing transportation requirements, by major types and ownership, 1,000 gross tons and over, as of Dec. 31, 1952*

[Tonnage in thousands]

Status and area of employment	Total all types			Freighters		
	Total	Private	Government	Total	Private	Government
Total (active and inactive)	37,373	15,313	22,059	27,196	8,191	19,004
A. Active vessels	17,966	14,843	3,122	9,631	7,970	1,661
1. Operating commercially	14,031	13,754	[1] 276	7,078	6,881	[1] 197
(*a*) Total foreign [2]	7,638	7,424	214	5,399	5,264	[1] 135
Nearby foreign	1,182	1,147	35	448	432	15
Overseas foreign	5,696	5,516	179	4,921	4,801	120
Foreign to foreign	761	761		31	31	
(*b*) Domestic trade	6,393	6,330	[1] 62	1,679	1,617	[1] 62
Coastwise	5,086	5,086		580	580	
Intercoastal	665	621	43	548	505	43
Noncontiguous	643	624	19	551	532	19
2. U. S. Government operations	3,935	1,089	2,846	2,553	1,089	1,464
Maritime Administration custody (GAA)	1,135		1,139	1,125		1,125
Department of Defense	1,707		1,707	339		339
Privately owned (TC)	1,089	1,089		1,089	1,089	
B. Inactive vessels	19,407	470	18,937	17,565	221	17,343
Temporarily inactive	569	470	[1] 99	310	221	89
Maritime Administration reserve fleet	[3] 18,838		18,838	17,255		17,255

Status and area of employment	Tankers			Combinations		
	Total	Private	Government	Total	Private	Government
Total (active and inactive)	7,769	6,774	995	2,407	349	2,059
A. Active vessels	7,494	6,558	936	840	316	524
1. Operating commercially	6,558	6,558		395	316	79
(*a*) Total foreign [2]	1,862	1,862		377	298	79
Nearby foreign	625	625		109	89	[4] 20
Overseas foreign	507	507		268	208	[1] 59
Foreign to foreign	730	730				
(*b*) Domestic trade	4,696	4,696		18	18	
Coastwise	4,506	4,506				
Intercoastal	116	116				
Noncontiguous	74	74		18	18	
2. U. S. Government operations	936		936	445		445
Maritime Administration custody (GAA)				13		13
Department of Defense	936		936	432		432
Privately owned (TC)						
B. Inactive vessels	275	216	59	1,567	33	1,535
Temporarily inactive	216	216		43	33	[1] 10
Maritime Administration reserve fleet	59		59	1,525		1,525

[1] Bareboat to and operated by private shipping companies.
[2] Excludes ships under A 2.
[3] Excludes 11 ships being deactivated for return to fleet and 97 miscellaneous small, damaged, or special-purpose ships.
[4] Owned by Panama Canal Company.

NOTE.—Tonnage figures not additive; detailed figures rounded to nearest thousand.

Source: Ship Data Branch, Statistics and Special Studies Office, Maritime Administration.

TABLE 3.—*United States-flag oceangoing privately owned freighters employed in the foreign trade, by subsidized and nonsubsidized carriers, as of Dec. 31, 1952*

Area of employment	Number of ships			Deadweight tons (thousands)		
	Total	Subsidized	Nonsubsidized	Total	Subsidized	Nonsubsidized
Total foreign trade	492	[1] 246	246	5,263	[1] 2,594	2,669
A. Nearby foreign	54	16	38	432	146	286
Central America	15	.....	15	89	.....	89
Mexico	1	1	.....	9	9	.....
West Indies; north coast South America	38	15	23	334	137	197
B. Overseas foreign	435	230	205	4,800	2,448	2,352
1. Trans-Atlantic	218	120	98	2,296	1,241	1,055
Atlantic Europe and United Kingdom	98	50	48	1,032	524	508
Baltic	7	7	.....	75	75	.....
Mediterranean	60	22	38	619	215	404
East and South Africa	23	23	.....	261	261	.....
West Africa	11	10	1	100	89	11
India and Pakistan	16	8	8	178	77	101
Persian Gulf	3	.....	3	31	.....	31
2. Trans-Pacific	144	62	82	1,596	689	907
Orient and Far East	133	52	81	1,480	584	896
Australia	10	10	.....	105	105	.....
India and Pakistan	1	.....	1	11	.....	11
3. South America	54	40	14	708	426	282
East coast	31	31	.....	333	333	.....
West coast	23	9	14	375	93	282
4. Around the world	19	8	11	260	92	108
C. Foreign to foreign	3	.....	3	31	.....	31
Caribbean-Canada	1	.....	1	10	.....	10
Other foreign to foreign	2	.....	2	22	.....	22

[1] Includes vessels operated by subsidized carriers but operating without subsidy contract.

NOTE.—Tonnage figures may not be additive; detailed figures rounded to nearest thousand.

Source: Ship Data Branch, Statistics and Special Studies Office, Maritime Administration.

TABLE 4.—*Employment of privately owned oceangoing United States-flag combinations in the foreign trade, by subsidized and nonsubsidized carriers, as of Dec. 31, 1952*

Area of employment	Number of ships			Deadweight tons (thousands)		
	Total	Subsidized	Nonsubsidized	Total	Subsidized	Nonsubsidized
Total foreign trade	34	26	8	297	248	49
A. Nearby foreign	13	5	8	89	40	49
Central America	1	.....	1	4	.....	4
West Indies; north coast South America	12	5	7	85	40	45
B. Overseas foreign	21	21	.....	208	208	.....
1. Trans-Atlantic	10	10	.....	99	99	.....
Atlantic Europe and United Kingdom	2	2	.....	29	29	.....
Mediterranean	6	6	.....	53	53	.....
East coast of South Africa	2	2	.....	17	17	.....
2. Trans-Pacific	.....	.....	.....	.....	.....	.....
Orient and Far East	.....	.....	.....	.....	.....	.....
3. South America	9	9	.....	88	88	.....
East coast	3	3	.....	29	29	.....
West coast	6	6	.....	59	59	.....
4. Around the world	2	2	.....	21	21	.....

NOTE.—Tonnage figures not additive; detailed figures rounded to nearest thousand.

Source: Ship Data Branch, Statistics and Special Studies Office, Maritime Administration.

TABLE 5.—*United States-flag oceangoing freight and combination vessels owned and operated in the foreign trade by nonsubsidized carriers, by type of service and area of employment, as of Dec. 31, 1952*

Area of employment	Number of ships				Deadweight tonnage (000 omitted)			
	Total	Liner	Industrial	Irregular	Total	Liner	Industrial	Irregular
Total foreign trade	254	165	42	47	2,719	1,742	486	491
A. Nearby foreign	46	15	29	2	334	106	220	8
Central America	16	[1] 1	15	.....	93	[1] 4	89	.....
West Indies, Bermuda, north coast South America	30	[2] 14	14	2	241	[2] 102	131	8
B. Overseas foreign	205	148	12	45	2,353	1,614	256	483
1. Trans-Atlantic	98	66	2	30	1,055	716	17	322
Atlantic Europe and United Kingdom	48	38	.....	10	508	403	.....	105
Mediterranean	38	17	2	19	404	181	17	206
West Africa	1	.....	.....	1	11	.....	.....	11
India and Pakistan	8	8	.....	.....	101	101	.....	.....
Persian Gulf	3	3	.....	.....	31	31	.....	.....
2. Trans-Pacific	82	67	.....	15	908	747	.....	161
Orient and Far East	81	67	.....	14	897	747	.....	150
India and Pakistan	1	.....	.....	1	11	.....	.....	11
3. South America	14	4	10	.....	282	43	239	.....
West coast	14	4	10	.....	282	43	239	.....
4. Around the world	11	11	.....	.....	108	108	.....	.....
C. Foreign to foreign	3	2	1	.....	32	22	10	.....
Caribbean—Canada	1	.....	1	.....	10	.....	10	.....
Other foreign to foreign	2	2	.....	.....	22	22	.....	.....

[1] Combination.
[2] Includes 7 combination vessels of 45,000 deadweight tons.

Source: Ship Data Branch, Statistics and Special Studies Office, Maritime Administration.

TABLE 6.—*Volume of United States oceanborne foreign trade 1937–38 and 1948–52*

[In thousands of tons of 2,240 pounds]

Trade, type of ship and service flag	1937	1938	1948	1949	1950	1951	1952
Total imports and exports	82,970	74,597	114,521	113,306	117,468	166,670	162,202
Dry cargo	54,044	44,071	78,278	71,833	66,332	110,434	99,842
Liner	36,026	29,150	41,990	49,095	42,100	46,530	43,818
United States	15,559	10,907	23,109	21,571	19,948	23,368	21,035
Foreign	20,467	18,243	18,881	27,524	22,152	23,162	22,783
Nonliner	18,018	14,921	36,288	22,738	24,232	63,904	56,024
United States	.....	730	13,659	5,748	2,357	20,858	11,888
Foreign	18,018	14,191	22,629	16,990	21,875	43,046	44,136
Tanker	28,926	30,526	36,243	41,473	51,136	56,236	62,360
United States	6,468	7,809	23,497	27,184	27,412	25,750	23,625
Foreign	22,458	22,717	12,746	14,289	23,724	30,486	38,735
Total imports	39,158	29,613	57,780	65,034	82,156	84,391	90,730
Dry cargo	28,783	20,624	30,352	31,039	37,435	39,286	39,239
Liner [1]	18,762	13,982	20,219	22,955	24,046	24,020	22,826
United States	8,191	5,588	11,776	10,174	12,089	12,889	12,022
Foreign	10,571	8,394	8,443	12,781	11,957	11,131	10,804
Nonliner	10,021	6,642	10,133	8,084	13,389	15,266	16,413
United States	.....	553	3,273	1,565	298	2,302	2,638
Foreign	10,021	6,089	6,861	6,519	13,091	12,964	13,775
Tanker	10,375	8,989	27,428	33,995	44,721	45,105	51,491
United States	4,747	4,818	20,798	24,208	24,502	22,336	20,554
Foreign	5,628	4,171	6,630	9,787	20,219	22,769	30,937
Total exports	43,812	44,984	56,741	48,272	35,312	82,279	71,472
Dry cargo	25,261	23,447	47,926	40,794	28,897	71,148	60,603
Liner	17,264	15,168	21,771	26,140	18,054	22,510	20,992
United States	7,368	5,319	11,333	11,397	7,859	10,479	9,013
Foreign	9,896	9,849	10,438	14,743	10,195	12,031	11,979
Nonliner	7,997	8,279	26,155	14,654	10,843	48,638	39,611
United States	.....	177	10,387	4,183	2,059	18,556	9,250
Foreign	7,997	8,102	15,768	10,471	8,784	30,082	30,361
Tanker	18,551	21,537	8,815	7,478	6,415	11,131	10,869
United States	1,721	2,991	2,699	2,976	2,910	3,414	3,071
Foreign	16,830	18,546	6,116	4,502	3,505	7,717	7,798

[1] Dry cargo imported by industrial carriers is included in liner imports. Distribution of industrial carryings inbound, for available years, is as follows: 1950, 6,909,000 tons; 1951, 8,289,000 tons; 1952, 8,289,000 tons (estimated).

Source: 1937–38, U. S. Maritime Commission; 1948–52, Bureau of the Census; Maritime Administration Form M. A. 7801.

TABLE 7.—*Percentage of United States and foreign-flag participation in United States oceanborne foreign trade, 1937–38 and 1948–52*

Trade, type of ship, and service flag	1937	1938	1948	1949	1950	1951	1952
Imports and exports:							
Dry cargo	100	100	100	100	100	100	100
Liner	67	66	54	68	63	42	44
United States	29	25	30	30	30	21	21
Foreign	38	41	24	38	33	21	23
Nonliner	33	34	46	32	37	58	56
United States		2	17	8	4	19	12
Foreign	33	32	29	24	33	39	44
Tanker	100	100	100	100	100	100	100
United States	22	26	65	66	54	46	38
Foreign	78	74	35	34	46	54	62
Imports:							
Dry cargo	100	100	100	100	100	100	100
Liner	65	68	67	74	64	61	58
United States	28	27	39	33	32	33	31
Foreign	37	41	28	41	32	28	27
Nonliner	35	32	33	26	36	39	42
United States		3	11	5	1	6	7
Foreign	35	29	22	21	35	33	35
Tanker	100	100	100	100	100	100	100
United States	46	54	76	71	55	50	40
Foreign	54	46	24	29	45	50	60
Exports:							
Dry cargo	100	100	100	100	100	100	100
Liner	68	65	45	64	62	32	35
United States	29	23	28	28	27	15	15
Foreign	39	42	22	36	35	17	20
Nonliner	32	35	55	36	38	68	65
United States		1	22	10	7	26	15
Foreign	32	34	33	26	31	42	50
Tanker	100	100	100	100	100	100	100
United States	9	14	31	40	45	31	28
Foreign	91	86	69	60	55	69	72

Source: Percentages derived from data prepared by U. S. Maritime Commission, 1937 and 1938. Bureau of the Census, 1948 to 1952. Maritime Administration Form No. 7801.

TABLE 8.—*Economic Cooperation Administration, Mutual Security Administration—financed shipments in United States overseas foreign trade by type of service and by flag of vessel*

[In thousands of long tons]

	All shipments			Liner			Bulk (tramp)			Tanker		
	Total	United States	Foreign	Total	United States	Foreign	Total	United States	Foreign	Total	United States	Foreign
Europe, Far East	74,219	41,363	32,856	22,607	12,909	9,698	46,035	26,613	19,422	5,576	1,841	3,735
1948 [1]	25,637	11,704	13,933	4,662	2,455	2,207	18,235	8,541	9,694	2,740	708	2,032
1949 [2]	16,127	9,558	6,569	6,002	3,785	2,217	8,962	5,195	3,767	1,163	578	585
1950	10,039	5,027	5,012	5,673	3,149	2,524	3,498	1,415	2,083	868	463	405
1951	13,883	10,051	3,832	4,015	2,351	1,664	9,591	7,667	1,924	276	33	243
1952	8,533	5,023	3,510	2,255	1,169	1,086	5,749	3,795	1,954	529	59	470
European recovery program:												
Apr. 3, 1948 to Apr. 2, 1949	25,637	11,704	13,933	4,662	2,455	2,207	18,235	8,541	9,694	2,740	708	2,032
Apr. 3, 1949 to Dec. 31, 1949	15,542	9,056	6,486	5,528	3,346	2,182	8,900	5,133	3,767	1,114	577	537
Jan. 1, 1950 to Dec. 31, 1950	9,373	4,467	4,906	5,090	2,666	2,424	3,415	1,338	2,077	868	463	405
Jan. 1, 1951 to Dec. 31, 1951	13,624	9,842	3,782	3,815	2,172	1,643	9,532	7,637	1,895	276	33	243
Jan. 1, 1952 to Dec. 31, 1952	8,260	4,874	3,386	2,014	1,029	985	5,717	3,786	1,931	529	59	470
Far East:												
Jan. 1, 1949 to Dec. 31, 1949	585	502	83	474	439	35	62	62		49	1	48
Jan. 1, 1950 to Dec. 31, 1950	666	560	106	583	483	100	83	77	6			
Jan. 1, 1951 to Dec. 31, 1951	259	209	50	200	179	21	59	30	29			
Jan. 1, 1952 to Dec. 31, 1952	273	149	124	241	140	101	32	9	23			

[1] Includes European recovery program shipments only for period Apr. 3, 1948 to Apr. 2, 1949.

[2] Includes full calendar year (1949) for Far East; period Apr. 3, 1949 to Dec. 31, 1949 for European recovery program.

Source: Economic Cooperation Administration, Mutual Security Agency, Transportation Division. Based on special tabulation prepared by Mutual Security Administration for Office of International Trade, U. S. Department of Commerce, June 1953.

TABLE 9.—*Passengers arriving and departing United States ports by flag of ship,[1] fiscal years 1937 and 1938; 1946 to 1952*

Year	Arrivals and departures			Percent carried by United States-flag ships	Arrivals			Percent carried by United States-flag ships	Departures			Percent carried by United States-flag ships
	Total	United States flag	Foreign flag		Total	United States flag	Foreign flag		Total	United States flag	Foreign flag	
1937 [2]	1,103,731	292,242	811,489	26.5	543,736	150,039	393,697	27.6	559,995	142,203	417,792	25.9
1938 [2]	1,142,533	317,690	824,843	27.8	577,268	159,122	418,146	27.6	565,265	158,568	406,697	28.1
1946	337,086	236,881	130,205	61.4	200,041	128,628	71,413	64.3	137,045	78,253	58,792	57.1
1947	651,689	372,202	279,487	57.1	356,426	203,880	152,546	57.2	295,263	168,322	126,941	57.0
1948	866,642	438,450	428,192	50.6	491,427	256,497	234,930	52.2	375,215	181,953	193,262	48.5
1949	910,674	433,536	477,138	47.6	502,593	259,849	242,744	51.7	408,081	173,687	234,394	42.6
1950	1,068,648	509,307	559,341	47.7	601,543	325,779	275,764	54.2	467,105	183,528	283,577	39.3
1951	946,495	385,002	561,493	40.7	547,866	247,874	299,992	45.2	398,629	137,128	261,501	34.4
1952	1,102,172	490,947	611,225	44.5	622,705	297,192	325,513	47.7	479,467	193,755	285,712	40.4

[1] Passenger travel statistics relate to the arrivals and departures of aliens and citizens, by sea between ports of the United States and noncontiguous foreign territory. These statistics do not include border crossers, seamen, military personnel, traffic between the continental United States and insular possessions, and cruise travelers.

[2] Estimated.

Source: Department of Justice; Immigration and Naturalization Service.

TABLE 10.—*Waterborne and airborne passenger arrivals in the United States by overseas foreign areas, fiscal years 1949–52* [1]

[In thousands of passengers]

Area year	Total passengers by air and sea	Passengers by air		Passengers by sea					
		Number of passengers	Percent of total by air and sea	United States and foreign flag		United States flag		Foreign flag	
				Number of passengers	Percent of total by air and sea	Number of passengers	Percent of total by sea	Number of passengers	Percent of total by sea
Europe:									
1949	479.8	149.0	31	330.8	69	117.8	36	213.0	64
1950	588.2	161.1	27	427.1	73	188.9	44	238.2	56
1951	581.6	180.4	31	401.2	69	137.1	34	264.1	66
1952	653.3	194.9	30	458.4	70	176.3	38	282.1	62
Asia:									
1949	49.1	7.8	16	41.3	84	40.0	97	1.3	3
1950	50.0	11.2	22	38.8	78	36.5	94	2.3	6
1951	63.5	38.9	61	24.6	39	22.6	92	2.0	8
1952 [2]	83.3	36.0	43	47.3	57	44.6	94	2.7	6
Africa:									
1949	6.8	3.7	54	3.1	46	1.9	61	1.2	39
1950	5.2	2.6	50	2.6	50	1.5	58	1.1	42
1951	4.5	2.5	56	2.0	44	1.3	65	.7	35
1952	7.9	5.6	71	2.3	29	1.6	70	.7	30
Oceania:									
1949	16.3	6.3	39	10.0	61	9.5	95	.5	5
1950	18.7	8.8	47	9.9	53	8.6	87	1.3	13
1951	22.1	12.8	58	9.3	42	8.6	92	.7	8
1952 [2]	8.6	7.9	92	.7	8	.4	57	.3	43
South America:									
1949	67.2	46.6	69	20.6	31	18.4	89	2.2	11
1950	67.4	47.5	70	19.9	30	17.8	89	2.1	11
1951	76.6	62.2	81	14.4	19	12.2	85	2.2	15
1952	90.8	75.9	84	14.9	16	11.0	74	3.9	26

[1] Passenger travel statistics relate to arrivals of aliens and citizens, by sea and air, between noncontiguous foreign countries and seaports of the United States. These statistics do not include seamen, military personnel, traffic between the continental United States and insular possessions, and cruise travelers.

[2] From 1949 to 1951, inclusive, Philippine passengers included in Oceania statistics; thereafter included in Asia statistics.

Source: Immigration and Naturalization Service, Department of Justice.

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TABLE 11.—*Maritime Administration reserve fleet as of Dec. 31, 1952—Number of ships*

Type and design of vessel	Speed	Total	James River	Wilmington	Hudson River	Mobile	Beaumont	Suisun Bay	Astoria	Olympia
Grand total		1,877	361	325	137	278	185	307	192	92
Dry cargo		1,669	256	325	129	278	184	244	182	71
C1-A and C1-B	14	30	3	1	13	3	1	6		3
C1-M	10	54		5	11	13	14	6	1	4
C1-S (concrete)	7	1						1		
C2	15	1						1		
C4	17									
EC2	11	1,427	231	305	93	249	147	190	168	44
VC2-S-AP2	15	79	13		10	1	11	20	8	16
VC2-S-AP3	17	15	2		2			5	3	3
Canadian Libertys	11	35	2	10		12	11			
N3	10-11	18	2	4				9	2	1
R1	10	5						5		
Miscellaneous	13-17	4	3					1		
Tanker		12	3					8	1	
Z-ET1	11	2	1						1	
T1	10	8						8		
Miscellaneous	9-11	2	2							
Combination		196	102		8		1	55	9	21
C1-A and C1-B	14	21	9		1			7	2	2
C1-S	14	9	9							
C2	15	2	1					1		
C4	17	22	12		1			7		2
P1 and 2	19-20	3	1		1					1
EC2	11	34	4					22	4	4
VC2-S-AP2	15	24	4		3		1	8		8
VC2-S-AP5	17	60	52					8		
Miscellaneous	12-21	21	10		2			2	3	4

Source: Ship Data Branch, Statistics and Special Studies Office, Maritime Administration.

TABLE 12.—*Maritime Administration reserve fleet as of Dec. 31, 1952—Deadweight tonnage*

[In thousands]

Type and design of vessel	Total	James River	Wilmington	Hudson River	Mobile	Beaumont	Suisun Bay	Astoria	Olympia
Grand total	18,838.3	3,384.7	3,405.8	1,367.9	2,880.7	1,893.9	2,974.5	2,022.5	908.3
Dry cargo	17,254.9	2,696.2	3,405.8	1,291.0	2,880.7	1,883.0	2,454.8	1,919.3	724.1
C1-A and C1-B	258.2	26.8	8.7	113.7	25.3	9.1	49.2	.....	25.4
C1-M	271.5	.....	25.1	55.5	65.3	70.5	30.0	5.1	20.0
C1-S (concrete)	5.3	.....	.....	.....	.....	.....	5.3	.....	.....
C2	8.7	.....	.....	.....	.....	.....	8.7	.....	.....
C4	.....	.....	.....	.....	.....	.....	.....	.....	.....
EC2	15,225.9	2,462.2	3,257.2	991.5	2,654.4	1,569.3	2,033.8	1,780.2	468.3
VC2-S-AP2	859.5	141.3	.....	108.7	10.9	119.7	217.8	87.1	174.0
VC2-S-AP3	161.4	21.4	.....	21.6	.....	.....	53.7	32.3	32.4
Canadian Libertys	364.0	20.8	104.0	.....	124.8	114.4	.....	.....	.....
N3	60.7	8.0	10.8	.....	.....	.....	32.3	5.6	4.0
R1	22.3	.....	.....	.....	.....	.....	22.3	.....	.....
Miscellaneous	17.4	15.7	.....	.....	.....	.....	1.7	.....	.....
Tanker	58.9	36.1	.....	.....	.....	.....	12.2	10.6	.....
Z-ET1	21.3	10.7	.....	.....	.....	.....	.....	10.6	.....
T1	12.2	.....	.....	.....	.....	.....	12.2	.....	.....
Miscellaneous	25.4	25.4	.....	.....	.....	.....	.....	.....	.....
Combination	1,524.5	652.4	.....	76.9	.....	10.9	507.5	92.6	184.2
C1-A and C1-B	184.6	77.0	.....	9.1	.....	.....	62.0	18.1	18.4
C1-S	22.9	22.9	.....	.....	.....	.....	.....	.....	.....
C2	19.0	9.3	.....	.....	.....	.....	9.7	.....	.....
C4	146.1	83.4	.....	7.5	.....	.....	43.0	.....	12.2
P1 and 2	12.8	8.8	.....	1.9	.....	.....	.....	.....	2.1
EC2	366.2	42.8	.....	.....	.....	.....	237.2	43.2	43.0
VC2-S-AP2	261.3	43.5	.....	32.7	.....	10.9	87.0	.....	87.2
VC2-S-AP5	339.1	294.9	.....	.....	.....	.....	44.2	.....	.....
Miscellaneous	172.5	69.8	.....	25.7	.....	.....	24.4	31.3	21.3

Source: Ship Data Branch, Statistics and Special Studies Office, Maritime Administration.

TABLE 13.—*Number of oceangoing merchant ships constructed in United States coastal shipyards, 1914–56, by account*

Year	Total	United States flag	Foreign flag	Year	Total	United States flag	Foreign flag
1914	24	24	.....	1936	9	9	.....
1915	23	21	2	1937	15	15	.....
1916	67	52	15	1938	19	19	.....
1917	120	85	35	1939	28	28	.....
1918	386	386	.....	1940	56	56	.....
1919	680	680	.....	1941	104	92	12
1920	450	438	12	1942	727	669	58
1921	138	116	22	1943	1,697	1,695	2
1922	16	15	1	1944	1,652	1,643	9
1923	16	16	.....	1945	1,191	1,186	5
1924	16	16	.....	1946	79	69	10
1925	5	5	.....	1947	38	21	17
1926	7	7	.....	1948	20	9	11
1927	12	12	.....	1949	33	3	30
1928	5	5	.....	1950	24	5	19
1929	8	8	.....	1951	10	7	3
1930	17	17	.....	1952	16	11	5
1931	13	13	.....	1953	40	29	11
1932	16	16	.....	1954	38	28	10
1933	5	5	.....	1955	3	3	.....
1934	6	6	.....	1956	.....	.....	.....
1935	2	2	.....				

NOTE.—1914–21, 2,000 gross tons and over; 1922–56, 1,000 gross tons and over.

Source: Office of Ship Construction, Maritime Administration.

TABLE 14.—*Summary of oceangoing merchant ships over 1,000 gross tons under construction and/or contract as of Sept. 1, 1953*

BETHLEHEM-SPARROWS POINT SHIPYARD, SPARROWS POINT, MD.

Type	Deadweight tons	Estimated delivery date	Type	Deadweight tons	Estimated delivery date
Mariner	13,400	Sept. 9, 1953	Tanker	18,100	Dec. 31, 1953
Do	13,400	Dec. 11, 1953	Do	18,100	Mar. 12, 1954
Do	13,400	Feb. 2, 1954	Do	29,250	June 8, 1954
Tanker	25,000	Oct. 5, 1953	Do	29,250	July 2, 1954
Do	29,250	Feb. 26, 1954	Do	16,000	June 18, 1954
Do	29,250	Nov. 24, 1953	Do	18,000	May 14, 1954
Do	29,250	Apr. 30, 1954	Do	16,000	Nov. 12, 1954

BETHLEHEM STEEL CO., SHIPBUILDING DIVISION, QUINCY, MASS.

Mariner	13,400	Sept. 9, 1953	Tanker	18,100	Mar. 26, 1954
Do	13,400	Oct. 9, 1953	Do	45,400	Mar. 19, 1954
Tanker	29,250	Oct. 13, 1953	Do	29,250	Apr. 30, 1954
Do	29,250	Aug. 16, 1954	Do	29,250	June 30, 1955
Do	29,250	Jan. 29, 1954	Do	26,950	Dec. 15, 1954
Do	29,250	Aug. 27, 1954			

BETHLEHEM PACIFIC COAST STEEL CO., SHIPBUILDING DIVISION, SAN FRANCISCO, CALIF.

Mariner	13,400	Dec. 28, 1953	Mariner	13,400	Jan. 15, 1955
Do	13,400	Apr. 1, 1954	Do	13,400	Apr. 15, 1955
Do	13,400	Nov. 1, 1954			

INGALLS SHIPBUILDING CORP., PASCAGOULA, MISS.

Mariner	13,400	Feb. 19, 1954	Mariner	13,400	Apr. 16, 1954

NEWPORT NEWS SHIPBUILDING & DRY DOCK CO., NEWPORT NEWS, VA.

Mariner	13,400	Nov. 7, 1953	Tanker	26,790	Mar. 26, 1954
Do	13,400	Mar. 19, 1954	Do	26,790	June 18, 1954
Tanker	19,203	Nov. 6, 1953	Do	38,000	June 15, 1954
Do	19,203	Feb. 5, 1954	Do	38,000	July 23, 1954
Do	26,620	Oct. 9, 1953	Do	38,000	Sept. 17, 1954
Do	26,620	Jan. 15, 1954	Do	38,000	Dec. 3, 1954

NEW YORK SHIPBUILDING CORP., CAMDEN, N. J.

Mariner	13,400	Oct. 30, 1953	Mariner	13,400	May 1, 1954
Do	13,400	Dec. 29, 1953	Do	13,400	July 1, 1954
Do	13,400	Mar. 10, 1954			

SUN SHIPBUILDING & DRYDOCK CO., CHESTER, PA.

Mariner	13,400	Oct. 30, 1953	Tanker	30,206	July 31, 1954
Do	13,400	Jan. 15, 1954	Do	25,500	Jan. 15, 1954
Tanker	16,665	Sept. 4, 1953	Do	30,600	Dec. 31, 1953
Do	30,206	June 15, 1954	Do	29,500	Apr. 28, 1954

Source: Office of Ship Construction, Maritime Administration, Feb. 16. 1954.

TABLE 15.—*Number of privately operated ships to be replaced annually, based on 20-year-life, as of Dec. 31, 1952*

Year of replacement	Total	Foreign trade					Domestic trade		
		Subsidized		Nonsubsidized					
		Freighters	Combinations	Freighters	Tankers	Combinations	Freighters	Tankers	Combinations
Total	1,297	229	30	400	125	20	172	318	3
1954	78		5	10	8	13	17	22	3
1955	3						1	2	
1956	6				1			5	
1957	12				2			10	
1958	8				3			5	
1959	9	1		1	2	3		2	
1960	28	12	4	2			2	8	
1961	38	18	1	5	2			12	
1962	74	14		15	4		11	30	
1963	266	33		87	45		18	83	
1964	348	59	3	126	30		60	70	
1965	322	64	1	128	25		50	54	
1966	57	25	9	10			11	2	
1967	20	3	4	9		3		1	
1968	10			7	1	1		1	
1969	3							3	
1970	4				1			3	
1971	6		2		1		2	1	
1972	5		1					4	

NOTE.—Ships temporarily inactive as of Dec. 31, 1952, have been assigned to trades in which they normally operate.

Source: Ship Data Branch, Statistics and Special Studies Office, Maritime Administration.

TABLE 16.—*Merchant fleets of principal maritime nations, seagoing vessels of 1,000 gross tons and over, as of Sept. 1, 1939; June 30, 1946; Dec. 31, 1952*

[Tonnage in thousands]

	Number			Deadweight tons		
	Sept. 1, 1939	June 30, 1946	Dec. 31, 1952	Sept. 1, 1939	June 30, 1946	Dec. 31, 1952
Total, all flags	12,798	12,445	14,019	80,601	99,220	114,946
United States	1,379	[1] 4,861	[2] 3,440	11,682	[1] 50,389	[2] 36,961
Foreign flag	11,419	7,584	10,579	68,919	48,831	77,985
British Empire	3,319	3,159	3,015	24,054	24,010	24,884
Argentina	45	64	143	268	430	1,171
Brazil	122	136	189	542	670	1,066
Denmark	379	208	312	1,576	953	1,902
France	555	262	582	2,999	1,613	4,253
Germany	854	242	363	5,177	1,160	1,830
Greece	436	146	207	2,791	1,006	1,747
Italy	667	123	537	3,911	692	4,306
Japan	1,180	327	521	7,145	1,432	3,805
Liberia			121			1,836
Netherlands	537	291	501	3,425	2,036	3,817
Norway	1,072	607	980	6,931	4,477	8,682
Panama	130	164	545	1,106	1,329	5,633
Spain	217	257	272	1,052	1,253	1,335
Sweden	484	443	599	2,033	2,204	3,330
U. S. S. R.	354	519	483	1,597	2,729	1,937
All other flags [3]	1,068	636	1,209	4,312	2,837	6,451

[1] Excludes 526 Government-owned ships of 4,682,000 deadweight tons transferred to foreign registry and included under their respective registries.

[2] Includes 91 Government-owned ships of 823,000 deadweight tons transferred to the Philippines and U. S. S. R. under lend-lease or other agreements and still remaining under these registries by subsequent arrangements.

[3] In addition to Liberia, the following countries, which did not have merchant marines in 1939, were listed in 1952 as having merchant marines: Burma, Colombia, Costa Rica, Ecuador, Guatemala, Iceland, Indonesia, Iran, Ireland, Israel, Korea, Switzerland, and Syria.

Source: U. S. Department of Commerce, Maritime Administration, Merchant Fleets of the World, Sept. 1, 1939–Dec. 31, 1951. 1952 data from Merchant Fleets of the World as of Dec. 31, 1952.

TABLE 17.—*Maritime Administration operating-differential subsidies, summary of subsidy payable, Jan. 1, 1947, to June 30, 1955, and expenditures through June 30, 1953*

	Number of voyages	Domestic cost	Estimated gross subsidy accrual	Estimated subsidy withheld (recapture)	Estimated subsidy payable	Subsidy paid through June 30, 1953	Estimated subsidy payments to be made subsequent to fiscal year 1953	Estimated payments during fiscal year 1954	Estimated payments during fiscal year 1955	Estimated payments to be made subsequent to fiscal year 1955
A. For operators holding operating-differential subsidy contracts prior to July 1, 1952 (calendar year):		*Thous.*	*Thous.*	*Thous.*	*Thous.*		*Thous.*	*Thous.*	*Thous.*	*Thous.*
1947	475	$23,240	$12,929	$8,824	$4,105	$2,988,583	$1,116	$634	$482	
1948	1,010	61,482	27,762	10,097	17,665	12,578,052	5,087	1,916	3,171	
1949	1,247	107,271	44,188	15,537	28,651	22,190,330	6,461	706	5,755	
1950	1,307	117,083	57,752	9,458	48,294	27,394,308	20,900	6,932	10,968	$3,096
1951	1,297	136,639	66,861	23,689	43,172	24,573,359	18,599	7,966	6,316	4,317
1952	1,344	168,120	82,483	21,360	61,123	34,354,924	26,768	13,854	6,802	6,112
1953	1,469	176,871	86,518	23,527	62,991		62,991	41,781	14,911	6,299
1954	1,455	172,824	84,673	23,089	61,584		61,584		33,096	28,488
6 months Jan. 1-June 30, 1955	745	89,317	44,089	12,114	31,975		31,975			31,975
Subtotal	10,349	1,052,847	507,255	147,695	359,560	124,079,556	235,481	73,789	81,501	80,191
B. Contracts approved subsequent to July 1, 1952 (calendar year):										
1953	66	8,527	4,018	1,449	2,569		2,569	2,167	145	257
1954	66	8,527	4,018	1,449	2,569		2,569		2,167	402
6 months Jan. 1 to June 30, 1955	33	4,263	2,009	725	1,284		1,284			1,284
Subtotal	165	21,317	10,045	3,623	6,422		6,422	2,167	2,312	1,943
C. Pending applications for new operators (calendar year):										
1954	39	3,052	1,583		1,583		1,583		1,187	396
6 months Jan. 1 to June 30, 1955	23	1,789	929		929		929			929
Subtotal	62	4,841	2,512		2,512		2,512		1,187	1,325
D. New or additional service for operators holding contracts as of July 1, 1952: 6 months Jan. 1 to June 30, 1955 (calendar year)	13	870	274	85	189		189			189
Total	10,589	1,079,875	520,086	151,403	368,683	124,079,556	244,604	75,956	85,000	83,648
Recapitulation:										
Calendar years 1947–52	6,680	613,835	291,975	88,965	203,010	124,079,556	78,931			
Calendar year 1953	1,535	185,398	90,536	24,976	65,560		65,560			
Calendar year 1954	1,560	184,403	90,274	24,538	65,736		65,736			
1st 6 months calendar year 1955	814	96,239	47,301	12,924	34,377		34,377			
Total	10,589	1,079,875	520,086	151,403	368,683	124,079,556	244,604			

TABLE 18.—*Analysis of base wage and overtime costs for cargo vessels of United States subsidized operators*

Operator	Voyages terminating in 1952				
	Number of voyages	Voyage days	Base wage cost	Overtime cost	Ratio—overtime to base wages
Gulf Coast:					
Lykes Bros. Steamship Co., Inc.:					*Percent*
Line A: T. R. 19	91	2,822	$1,326,703.60	$622,442.29	46.92
Line B–1: T. R. 21	18	1,094	512,508.50	212,622.09	41.49
Line B–2: T. R. 21	75	4,384	2,140,048.51	877,502.32	41.00
Line C: T. R. 13	39	2,685	1,316,692.61	525,162.74	39.88
Line D: T. R. 22	23	2,761	1,495,495.07	462,299.06	30.91
Line E: T. R. 15–B	14	1,596	762,114.92	277,008.93	36.35
Total	260	15,342	7,553,563.21	2,977,037.43	39.41
Mississippi Shipping Co.:					
T. R. 14	15	1,381	661,390.12	261,151.70	39.49
T. R. 20	25	2,517	1,276,271.34	476,757.51	37.36
Total	40	3,898	1,937,661.46	737,909.21	38.08
Total gulf coast	300	19,240	9,491,224.67	3,714,946.64	
Ratio.....percent			100	39.14	39.14
Pacific Coast:					
American Mail Line, Ltd.: T. R. 30	32	2,909	$1,568,154.49	$829,449.54	52.89
American President Lines:					
T. R. 29	20	1,586	896,797.98	471,241.22	52.55
R. W	19	2,542	1,491,134.47	803,372.08	53.88
Total	39	4,128	2,387,932.45	1,274,613.30	53.38
Grace Line, Inc.: T. R. 25	25	2,160	1,154,913.94	723,506.49	62.65
Moore-McCormack Lines, Inc.: T. R. 24	13	1,452	869,575.66	497,243.65	57.18
Oceanic Steamship Co., Inc.: T. R. 27	9	1,259	654,383.24	307,164.10	46.94
Pacific Argentine Brazil Line: T. R. 24	11	1,502	826,568.35	410,208.96	49.63
Total Pacific Coast	125	13,410	7,461,528.13	4,042,186.04	
Ratio.....percent			100	54.17	54.17
Atlantic coast:					
American Export Lines, Inc.:					
T. R. 10	78	4,502	$2,537,823.60	$819,097.80	32.28
T. R. 18	24	2,554	1,357,131.28	430,449.62	31.72
Total	102	7,056	3,894,954.88	1,249,547.42	32.08
Farrell Lines, Inc.:					
T. R. 14–1	18	1,741	929,461.02	399,250.79	42.96
T. R. 15–A	24	3,017	1,602,206.49	582,334.37	36.35
Total	42	4,758	2,531,667.51	981,585.16	38.77
Grace Line, Inc.:					
T. R. 2	23	1,105	654,154.13	311,358.65	47.60
T. R. 4	6	172	112,807.00	41,987.91	37.22
Total	29	1,277	766,961.13	353,346.56	46.07
Moore-McCormack Lines, Inc.:					
T. R. 1	90	7,624	4,191,259.53	1,622,206.91	38.70
T. R. 6	41	2,281	1,266,372.13	552,140.54	43.60
Total	131	9,905	5,457,631.66	2,174,347.45	39.84
New York & Cuba Mail Steamship Co.:					
T. R. 3	52	1,488	762,301.40	320,662.25	42.07
T. R. 4	53	740	463,764.58	221,407.39	47.74
Total	105	2,228	1,226,065.98	542,069.64	44.21
Seas Shipping Co.: T. R. 15–A	34	3,831	2,030,791.94	808,993.37	39.84

TABLE 18.—*Analysis of base wage and overtime costs for cargo vessels of United States subsidized operators*—Continued

Operator	Voyages terminating in 1952				
	Number of voyages	Voyage days	Base wage cost	Overtime cost	Ratio—overtime to base wages
Atlantic coast—Continued					
United States Lines Co.:					*Percent*
Line B: T. R. 5	145	6,598	$3,804,235.00	$1,459,583.07	38.37
Line C: T. R. 5	52	2,515	1,451,185.68	553,536.55	38.14
Line D: T. R. 12	19	2,760	1,506,924.09	530,549.30	35.21
Line E: T. R. 16	17	2,563	1,424,409.26	480,412.82	33.73
Total	233	14,436	8,186,754.03	3,024,081.74	36.94
Total Atlantic Coast	676	43,491	24,094,827.13	9,133,971.34	
Ratio.....percent			100	37.91	37.91
Grand total	1,101	76,141	$41,047,579.93	$16,891,104.02	
Ratio.....percent			100	41.15	41.15
Combination vessels:					
American Export Lines, Inc.: 4 *Aces:* T. R. 10	26	1,456	1,940,985.46	732,047.12	37.72
American President Lines, Ltd.: *President Monroe* and *Polk:* R. W.	6	769	967,557.59	569,433.83	58.85
Farrell Lines, Inc.: C3 Comb: T. R. 15A	10	723	713,897.45	343,755.23	48.15
Grace Line, Inc.:					
C2 Comb.: T. R. 2	53	2,233	2,036,081.34	956,305.55	46.97
C2 Comb.: T. R. 4	10	212	202,683.86	92,393.45	45.59
Total Grace Line, Inc	63	2,445	2,238,765.20	1,048,699.00	46.84
Mississippi Shipping Co., Inc.: C3 Comb.: T. R. 20	19	1,015	1,281,173.57	540,981.41	42.23
Total combination vessels	124	6,408	7,142,379.27	3,234,916.59	45.29
Passenger vessels:					
American Export Lines, Inc.: *Constitution-Independence:* T. R. 10	28	697	3,939,253.97	2,139,639.99	54.32
American President Lines, Ltd.: *President Cleveland-Wilson:* T. R. 29	16	744	2,340,003.65	1,249,396.31	53.39
Grace Line, Inc.: *Santa Paula-Rosa:* T. R. 4	10	144	300,661.11	158,614.57	52.76
Moore McCormack Lines, Inc.: Good Neighbor Fleet: T. R. 1	25	1,071	3,708,665.59	1,749,079.19	47.16
United States Lines Co.:					
America: T. R. 5, 7 and 9	16	342	2,131,460.97	1,349,116.25	63.30
United States: T. R. 5, 7, and 9	11	163	1,680,586.57	1,261,955.06	75.09
Total United States Lines	27	505	3,812,047.54	2,611,071.31	68.50
Total passenger vessels	106	3,161	14,100,631.86	7,907,801.37	56.08
Total passenger and combination vessels	230	9,569	21,243,011.13	11,142,717.96	52.45

TABLE 19.—*Specified subsidized operators' itemized statement of overhead expenses and relation to vessel operating revenue, calendar year 1952*

	American Mail Line, Ltd.		American President Lines, Ltd.		American Export Lines, Inc.		United States Lines Co.	
	Administrative and general expense	Percent of each item to total	Administrative and general expense	Percent of each item to total	Administrative and general expense	Percent of each item to total	Administrative and general expense	Percent of each item to total
Salaries of officers	$126,276.03	11.38	$302,782.00	4.64	$211,351.00	3.60	$398,088.00	4.57
Wages of employees	556,029.64	50.11	3,822,837.00	58.62	3,204,279.00	54.64	4,921,195.00	56.46
Legal and accounting fees and expenses	26,827.40	2.42	193,460.00	2.97	64,293.00	1.10	299,831.00	3.44
Rent, heat, light, and power	48,673.49	4.39	374,090.00	5.74	248,605.00	4.24	480,973.00	5.52
Communication expenses	54,698.40	4.93	276,741.00	4.24	363,502.00	6.20	350,819.00	4.02
Office supplies, stationery, and printing	24,469.31	2.20	180,851.00	2.77	175,830.00	2.99	311,831.00	3.58
Membership dues and subscriptions	66,299.88	5.98	208,645.00	3.20	51,768.00	.88	130,281.00	1.49
Entertaining and solicitation	41,892.16	3.78	235,850.00	3.62	199,704.00	3.40	337,400.00	3.87
Traveling expenses	61,994.87	5.59	63,056.00	.97	144,214.00	2.46	285,079.00	3.27
Insurance and bond premiums	8,778.93	.79	38,148.00	.59	60,426.00	1.03	43,578.00	.50
Pensions and relief	19,612.74	1.77	314,420.00	4.82	223,800.00	3.82	330,892.00	3.80
Postage	11,093.92	.99	106,405.00	1.63	121,124.00	2.07	182,784.00	2.10
Maintenance of office building and equipment	1,579.03	.14	64,150.00	.98	56,838.00	1.14	119,715.00	1.37
Miscellaneous	61,331.13	5.53	339,963.00	5.21	728,786.00	12.43	523,822.00	6.01
Total administrative and general expense	1,109,556.93	100.00	6,521,398.00	100.00	5,864,520.00	100.00	8,716,288.00	100.00
Advertising	$42,760.53		$394,217.00		$743,568.00		$942,392.00	
Total number of owned vessels	9		17		30		48	
Total vessel operating revenue for all services	$12,653,743.51		$48,298,425.32		$61,750,365.00		$94,237,646.52	
Percent of overhead to total vessel operating expense	10.0		14.7		10.4		11.50	
Percent of overhead to revenue	8.7		13.5		9.5		9.25	
Estimated 1952 subsidy accrual	$2,441,754.13		$8,677,484.48		$11,950,964.35		{ $6,305,989.65	(1)
							{ 11,185,868.85	(2)
Estimated 1952 subsidy recapture accrual	539,415.36		835,440.66		649,359.17		{ 252,412.21	(1)
							{ 7,582,419.49	(2)
Estimated subsidy payable	1,902,338.77		7,842,043.82		11,301,605.18		{ 6,053,577.44	(1)
							{ 3,603,449.36	(2)

[1] Passenger.
[2] Cargo.

Source: Annual financial statements of subsidized operators.

TABLE 19.—*Specified subsidized operators' itemized statement of overhead expenses and relation to vessel operating revenue, calendar year 1952*—Continued

	Lykes Bros. Steamship Co., Inc.		Farrell Lines, Inc.		The Oceanic Steamship Co.		Seas Shipping Co., Inc.	
	Administrative and general expense	Percent of each item to total	Administrative and general expense	Percent of each item to total	Administrative and general expense	Percent of each item to total	Administrative and general expense	Percent of each item to total
Salaries of officers	$368,171.00	7.36	$140,675.00	7.77	$41,526.00	9.33	$157,941.00	9.88
Wages of employees	2,879,938.00	57.53	940,428.00	51.96	224,936.00	50.54	684,425.00	42.80
Legal and accounting fees and expenses	184,663.00	3.69	89,673.00	4.96	12,782.00	2.87	115,821.00	7.24
Rent, heat, light, and power	140,686.00	2.81	11,513.00	.64	24,364.00	5.47	44,981.00	2.81
Communication expenses	189,925.00	3.79	35,862.00	1.98	18,675.00	4.20	42,513.00	2.66
Office supplies, stationery, and printing	119,782.00	2.39	45,039.00	2.49	16,531.00	3.71	42,246.00	2.64
Membership dues and subscriptions	123,493.00	2.47	31,736.00	1.75	11,500.00	2.58	35,090.00	2.19
Entertaining and solicitation	131,807.00	2.63	81,118.00	4.48	7,181.00	1.61	166,767.00	10.43
Traveling expenses	91,759.00	1.83	54,298.00	2.99	17,768.00	3.99	117,883.00	7.37
Insurance and bond premiums	21,332.00	.43	34,191.00	1.89	3,735.00	.84	29,979.00	1.87
Pensions and relief	167,627.00	3.35	115,408.00	6.38	10,272.00	2.31	[1] None	
Postage	86,278.00	1.72	27,270.00	1.51	6,011.00	1.35	19,535.00	1.22
Maintenance of office building and equipment	74,872.00	1.50	3,945.00	.22	1,417.00	.32	22,604.00	1.41
Miscellaneous	425,286.00	8.50	198,795.00	10.98	48,407.00	10.88	119,546.00	7.48
Total administrative and general expense	5,005,619.00	100.00	1,809,951.00	100.00	445,105.00	100.00	1,599,331.00	100.00
Advertising	$159,652.00		$156,315.00		$2,519.00		$99,824.00	
Total number of owned vessels	54		16		4		12	
Total vessel operating revenue for all services	$78,593,806.00		$21,692,146.17		$4,714,977.00		$16,390,605.79	
Percent of overhead to total vessel operating expense	8.4		9.9		11.8		12.8	
Percent of overhead to revenue	6.37		8.34		9.44		9.76	
Estimated 1952 subsidy accrual	$9,461,751.54		$4,164,865.09		$1,010,762.74		$2,904,062.00	
Estimated 1952 subsidy recapture accrual	5,283,931.89		802,742.47		None		None	
Estimated subsidy payable	4,177,819.65		3,362,122.62		1,010,762.74		2,904,062.00	

[1] Included in miscellaneous for $96,280.

Source: Annual financial statements of subsidized operators.

TABLE 20.—*Summary schedule of gross subsidy accrual and recapture accrual based on (1) wages only, minimum sailings; (2) wages only, minimum to maximum sailings; and (3) all items, minimum sailings: (4) cumulative totals for the period Jan. 1, 1947, to June 30, 1955*

[In thousands]

	(1) Wages only, minimum sailings		(2) Wages only, minimum to maximum sailings, terminated		(3) All items, minimum sailings		(4) All items, minimum to maximum sailings, per 1955 budget	
	Gross subsidy accrual	Recapture accrual	Gross subsidy accrual	Recapture accrual	Gross subsidy accrual	Recapture accrual	Gross subsidy accrual	Recapture accrual
American Export Lines, Inc	$50,553	0	$54,436	0	$62,458	0	$64,866	$57
American Mail Line, Ltd	14,994	$6,418	14,714	$6,186	17,435	$7,288	17,133	7,187
American President Lines, Ltd	52,678	9,189	54,601	9,426	59,548	11,926	56,867	10,116
Farrell Lines, Inc	18,626	0	21,605	0	22,254	0	25,155	1,608
Grace Line, Inc	24,972	7,255	27,681	8,581	32,419	10,957	43,457	14,775
Lykes Bros. Steamship Co., Inc	43,452	41,314	50,868	45,035	51,692	45,285	60,910	46,610
Mississippi Shipping Co., Inc	19,974	4,292	21,236	4,828	22,227	5,390	23,818	5,868
Moore-McCormack Lines, Inc	58,044	23,316	62,625	25,477	70,128	28,373	74,510	23,465
New York & Cuba Mail Steamship Co	4,845	0	5,289	0	5,471	0	7,990	285
The Oceanic Steamship Co	5,081	51	5,023	51	6,393	78	6,650	78
Pacific Argentine Brazil Line	5,354	0	5,364	0	6,430	0	6,533	0
Pacific Far East Line, Inc	4,734	1,416	4,734	1,416	5,344	1,726	6,121	2,114
Pacific Transport Lines, Inc	3,187	1,140	3,187	1,140	3,569	1,330	3,925	1,509
Seas Shipping Co., Inc	11,180	450	13,530	452	13,827	450	16,121	453
United States Lines Co.:								
Passenger	24,977	0	26,391	0	32,801	755	103,244	37,193
Cargo	52,385	27,031	56,102	28,906	63,180	32,425		
Total	395,036	121,869	427,387	131,499	475,146	145,985	517,300	151,318
Percent of all items, minimum to maximum sailings, per 1955 budget	76.4	80.5	82.6	86.9	91.9	96.5	100.0	100.0

Source: Contracts Branch, National Shipping Authority, and Office of Subsidy and Government Aid.

TABLE 21.—*Effect of subsidized cargo ship replacement on subsidized operators' earnings*

Name of carrier	Net profit after gross subsidy accrual and before depreciation allowances on subsidized cargo ships and before taxes	Number of subsidized cargo ships		Allowances for depreciation on subsidized cargo ships		Percent depreciation of 1952 profit	
		Existing ships	Replacement ships	Existing ships	Replacement ships [1]	Existing ships	Replacement ships
American Export Lines, Inc	$9,613,258	20	20	$1,222,561	$4,500,625	12.7	46.8
American Mail Line, Ltd	2,754,358	9	9	650,288	2,527,000	23.6	91.7
American President Lines, Ltd	4,316,758	12	5	1,022,336	1,417,875	23.7	32.8
Farrell Lines, Inc	4,942,087	14	14	902,436	3,633,750	18.3	73.5
Grace Line, Inc	10,581,453	12	12	879,846	2,899,875	8.3	27.4
Lykes Bros. Steamship Co., Inc	22,370,292	51	51	2,873,535	12,772,750	12.8	57.1
Mississippi Shipping Co., Inc	3,804,622	11	11	791,817	2,396,375	20.8	63.0
Moore-McCormack Lines, Inc	20,204,843	34	34	2,417,221	9,072,500	12.0	44.9
New York & Cuba Mail Steamship Co	2,901,700	6	6	470,023	1,303,875	16.2	44.9
The Oceanic Steamship Co	931,401	4	4	221,519	1,014,125	23.8	108.9
Pacific Argentine Brazil Line	1,160,274	4	4	314,550	1,225,500	27.1	105.6
Seas Shipping Co., Inc	4,624,457	12	12	1,216,813	3,382,000	26.3	73.1
United States Lines Co	19,529,337	40	40	2,472,944	9,804,000	12.7	50.2
Total	107,734,840	229	222	15,455,889	55,950,255	14.3	51.9

[1] Based on 20-year life and ignores residual value of ships.

Source: Profit and depreciation for 1952 from company reports in file with the Maritime Administration. Replacement depreciation based on replacement cost estimate to the operator prepared by Maritime Administration in connection with administration of voluntary deposit as of Dec. 31, 1952.

APPENDIX B

TIME CRITERIA IN PLANNING AND GOVERNMENT FINANCING SHIP CONSTRUCTION

The development and preparation of plans and specifications for an oceangoing ship are comparable to the engineering work performed in planning large, complex shoreside installations. The ultimate design is based on financial, competitive, and operational considerations which must be determined before the basic ship's characteristics are presented to the naval architect for preliminary development. The preliminary studies are discussed between the naval architect and the prospective ship operator, final basic ship's characteristics are agreed upon and final plans and specifications developed. This work may require from 6 months for a cargo ship to over 1 year for a passenger or cargo-passenger ship.

At this stage, the prospective shipowner may file an application for Government aid with the Maritime Administration and present his proposed ship design for consideration. Three to six months may elapse before the Maritime Administration staff has completed its study, obtained Department of the Navy acceptance of the design as required by the act, and presented its recommendations for the Federal Maritime Board action. If the application is tentatively approved, it is then necessary to request appropriations from Congress for each such approved application. At this stage considerable delay is encountered since an application approval either must be anticipated in advance of the annual Maritime Administration construction appropriation request or a supplementary congressional appropriation must be requested. The budget for each fiscal year is developed at least 9 months in advance. Annual budget estimates for the succeeding year are usually required by the Bureau of the Budget during August but their clearance by the Maritime Administrator and the Department of Commerce usually requires a period of several weeks prior thereto. Even after Congress receives the request, its enactment in whole or part is not assured depending on administrative or congressional policy, regardless of the construction-differential subsidy provisions in the Merchant Marine Act of 1936. As a result, a prospective applicant for Government aid has no assurance of being allowed the benefits of the Merchant Marine Act of 1936, even after considerable expense has been incurred and a long period of time has elapsed. But even if the appropriation is obtained, considerable time has elapsed between the approval of the application and the authorization to obtain bids because of the delay resulting from the need to secure congressional appropriations.

After funds are appropriated, from 4 to 7 months are required to request bids, to evaluate the bids, and to award the contract. It then usually requires another 18 to 24 months to construct a tanker or cargo ship and an average of 3 years for a passenger ship. It must be emphasized that it usually takes a shipyard 6 months after it has been awarded a contract to make detailed structural plans and to obtain sufficient material to lay the keel. Therefore, the total time necessary to plan and construct a ship from its inception varies from approximately 3 years to over 6 years depending upon the type of ship under consideration and the cumulative delays in completing the above sequence of events. The following data summarize these time factors:

Estimated minimum and maximum time necessary to plan and construct ships under existing Government policy

	Period of time
To develop preliminary ship characteristics	6 to 12 months.
To process application in administration	3 to 6 months.
To obtain necessary appropriation if application approved	6 to 12 months or longer.
To obtain bids, evaluate the bids, compute the foreign cost and secure the purchaser's approval of the selling price, and award contract to shipyard	4 to 7 months.
To construct ship	18 months to 3 years.
Total	3 years and 1 month to 6 years and 1 month.

The effect of the uncertainty of prompt Government financial support is indicated in the case of the American-Hawaiian Steamship Co. who recently filed an application for the conversion of three war-built C–4's to combination ore and bulk oil carriers. While the application met the requirements for construction

subsidy under the act, the Administration did not request a supplemental appropriation from Congress. As a result, the conversion work was awarded to a Japanese shipyard. In 1949, the Mississippi Shipping Co. made application for subsidy aid in constructing one cargo-passenger ship. Mississippi has repeatedly expressed a desire to construct this ship, but no Government aid has beeen possible. Applications requesting assistance in the construction of tankers have been filed for which appropriations were unavailable.

Availability of construction subsidy funds is essential to maintain some orderliness in the ship replacement program, as well as permit possible fleet expansions. Opportunities to acquire long-term charters for new tonnage may be forfeited due to delay in obtaining Government assistance. Such delays may prevent prospective shipowners from obtaining lower bids during an ebb period in the shipbuilding industry. Congress limits the Maritime Administration construction authority to specifically authorized and named vessels. A revolving construction subsidy fund as authorized by section 206 of the Merchant Marine Act, 1936, as amended, or at least a revolving fund to encourage and permit ship construction under special conditions, would aid greatly in reducing the delays detailed above.

Appendix C

Glossary of Shipping Terms

Bulk cargo: Grain, coal, and other commodities shipped loose without packaging and without mark or count.

Cargo: Goods or merchandise in process of transport by ship.

Chartered vessel: A vessel which is hired either for a given voyage or for a period of time.

Coastwise: By way of, or along the coasts in transportation by water. Ocean-going coastwise trades include transportation along the Atlantic coast or the gulf coast or the Pacific coast or between the Atlantic and the gulf coasts.

Combination-type ship: A ship carrying more than 12 passengers and which transports a large quantity of cargo.

Common carrier: A carrier which accepts merchandise for transportation from any and every shipper for compensation on an impartial basis. A liner-type operation.

Conference rates: Rates established by shipping conferences. (*See* Shipping conference.)

Deadweight ton: The carrying capacity of a ship in tons of 2,240 pounds.

Deadweight tonnage: The number of tons (2,240 pounds) of cargo, stores, and bunker fuel that a vessel can carry. It is the difference between the number of tons of water a vessel displaces when light and the number of tons it displaces when loaded to its "deep-load line marks." Deadweight tonnage is used interchangeably with deadweight carrying capacity. A ship's capacity for weight cargo is less than its total deadweight tonnage.

Domestic commerce of the United States: Commerce between continental United States ports and between the United States and its possessions which is reserved to vessels built, owned, and operated by citizens of the United States.

Dry-cargo freighter: A vessel designed mainly to carry cargo other than liquids in bulk. It may not have accommodations for more than 12 passengers.

Drydock: Facility used for the construction, repair, and cleaning of ships.

Effective United States control: Ships owned by United States citizens and registered under the laws of Panama, Honduras, Venezuela, and Liberia are considered to be available to the United States in the event of national emergency.

General cargo: Miscellaneous goods or merchandise.

Gross tonnage (vessels): Applies to vessels and not to cargo. In general it is determined by dividing by 100 the contents, in cubic feet, of the vessel closed-in spaces. It is a measurement unit in terms of 100 cubic feet.

Industrial carrier. (*See* Private carrier.)

Intercoastal: Between any two coasts of the continental United States through the Panama Canal.

Fringe item: Any labor cost borne by an employer other than basic wage payments. Includes payments for overtime, social security, family allowances, health payments, etc.

Knot: A unit of speed and not of distance. The speed of a ship is expressed in knots, but the distance covered is expressed in nautical miles (6,080.27 feet).

Liner: A vessel engaged principally in the transportation of miscellaneous package and piece goods, although it carries some bulk cargo. It provides a common

carrier type of service on a regular schedule and over a definite route. The term relates to the type of service provided by a ship and not the physica characteristics of a vessel.

Longshoreman: A person employed about the wharves of a port to load and unload vessels.

Measurement cargo: Cargo which stows more than 40 cubic feet per ton of 2,240 pounds.

On the beach: A term used by mariners to indicate an unemployed status.

On the berth: A ship is on the berth when it is at a definite loading place ready to accept cargo as a common carrier.

Nonliner vessel. (*See* Tramp ship.)

Package freight vessel: A ship specialized in the transportation of miscellaneous or general types of cargo.

Passenger ship: A ship whose revenues are obtained principally from passengers.

Private carrier: A ship operation in which the same person owns both the ship and the cargo. Also called an industrial carrier. Many private carriers transport common carrier cargo to supplement their regular cargoes.

Rate war: The reduction of liner rates to abnormally low levels by a ship operator or by a group of operators. Usually a temporary situation.

Ratings: Grades or ranks of seamen.

Shippers: Persons having goods to transport.

Shipping: Ships collectively; also the act of dispatching goods.

Shipping conference: A voluntary organization of ship operators cooperating for the purpose of regulating competition on a particular trade route or routes.

Shipway: The space in a shipyard where a foundation for launching ways and keel blocks exists and which is occupied by a ship while under construction.

Stevedore: A person having charge of the loading and unloading of ships.

Tanker: A ship built to carry liquids in bulk, especially petroleum.

Time charter: A basic shipping document embodying the contract or agreement between the party hiring a vessel and the owner or agent letting said vessel. Such an agreement places the vessel in the possession of the charterer. As a rule, the charterer pays the owner an agreed rate per deadweight ton per month for the use of a cargo-type vessel and to furnish the fuel and pay all expenses incurred at ports, except crew and provision expense.

Tramp ship: A ship distinguished more by its type of service than by its structural characteristics. It is engaged principally in moving bulk commodities which move in vessel lots. It does not operate on a published schedule or over a definite route, but accepts that cargo on a contract carrier basis which is most remunerative.

Weight cargo: Cargo on which the transportation charge is assessed on the basis of weight.

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